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ABSTRACT

This volume presents articles on aspects of suggestive learning with emphasis on foreign language instruction. The following articles and reviews are included: (1) "Biofeedback in Holistic Education," by Larry O. Rouse: (2) "Report on the Helsinki Suggestopedia Seminar, June, 1978," by Kjell Weinius: (3) "Suggestology and Suggestopedia Revisited," by Cecelia Pollack: (4) "The Effects of Active Dramatic Presentation, Passive Review with Music, Practice Sentence Making, Word List Difficulty and Sex of Subject on Learning Rare English Words," by Donald H. Schuster and Terry M. Miller: (5) "One Year of Suggestopedia in France," by Fanny Saferis: (6) "SALT Teacher's Checklist," by Donald H. Schuster: (7) "Book Review of 'Superlearning,'" by Richard A. Wheeler: (8) "Book Review of 'One revolution dans l'art d'apprendre,'" by Wil Knibberler: and (9) "Abstract of 'Hypnosis and Language Learning,'" by Myrna Lynn Hammerman. (AMH)

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Volume 4, Number 1 Spring 1979

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Biofeedback in Holistic Education

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Abstract

This is a brief background of biofeedback and how it is being used in the educational process.

Biofeedback is a process responsible for our internal awareness and control of physiological events and states affecting health, performance and creativity. Once connected into a feedback loop, the individual can use the information provided to improve internal awareness of and control over biological systems and habits. A wide range of techniques have been used to implement this basic idea, including nutritional analysis, meditation, yoga and more recently the electronic monitoring of biophysical signals generated by the internal physiology.

Biofeedback may be viewed as an educational process and is currently being introduced to students in the educational system on several levels including physical education, health science, recreation, science, art, the basic learning process, and rehabilitation for the learning and physically disabled. The basic results center around students' learning to cope more effectively with stress, improving their ability to concentrate attention, and enhancing self-awareness.

Work along these lines is being funded through government and private sources and a national communication network has been established by members of the Biofeedback Society of America, the American Association of Biofeedback Clinicians, the Society for Suggestive-Accelerative Learning and Teaching (SALT), and Educators in Biofeedback, a California based organization of educators and biofeedback scientists working toward the immediate implementation of this new and effective technology.

In a world of ever present division and stress, it is the adequacy of one's coping strategy that determines personal effectiveness and strength. Interdisciplinary science has established beyond doubt that it is the function of the mind/body as an integrated unit that maintains health and well-being. Fragmentation and disruption of these harmonious psychophysical patterns degrade the quality of life and will eventually cause illness. Young people may be accumulating the effects of stress without overtly developing outward physical symptoms for years. However, by the end of the basic twelve year educational period many are approaching adult levels of stress disorders. It is because the effects of stress and disruptive influences are subtle and accumulative that work must begin early in the educational process. Biofeedback should be applied as a

broad preventive approach to improving personal survival skills both in the academic and professional worlds. The otherwise pragmatic distinction between physical and mental education is thus transcended.

Although the roots and early examples of biofeedback go back to the beginning of the scientific revolution, intensive scientific research and applications over the last decade are responsible for the emergence of biofeedback as the new science of self-control. Besides the many specific applications that can be taken advantage of at the present time, biofeedback is being appreciated in its own right as a fertile new field in academic curricula. This aspect is paralleled by the recent upsurge of interest in interdisciplinary educational projects among the traditional specialities. The poet, the athlete, the philosopher, the scientist all share in this new age of awareness.

One of the most profound discoveries in biofeedback has involved the repeated observation that individuals who openly and explicitly express a sincere belief in their ability to control their personal destiny in a variety of situations are also the ones who are internally aware of and in control of physiological functions and who in addition are able to excel in the acquisition of improved skills through biofeedback. This important finding serves to emphasize the fact that biofeedback is a process and not a machine, a natural state of affairs that is complemented by technology, not created or destroyed by it.

The broader interpretation of these and other results indicates that the cognitive structures created through the experiential study of physical science and experimental philosophy provide a working basis for mind/body synergism. The biofeedback process integrates all features of this educational model and establishes an immediate and useful beginning point in its application.

It is extremely important to remember that the beginning and final phases of biofeedback training involving the use of electronic monitors does not depend upon external hardware for their success. In fact, it is a basic mistake to create the illusion that connecting oneself to a biofeedback machine will somehow miraculously improve one's ability to learn or maintain a higher state of well-being. Therefore, the initial stages of training have nothing whatsoever to do with instrumentation, but instead must establish a cognitive orientation to the basic biofeedback process and teach simple self-awareness and control skills that will form the basis of advancement during work with the instrumentation. Use of instrumentation includes explanation that natural body functions are monitored, interpreted and presented as feedback information for the purpose of comparing an external objective evaluation with an internal subjective one. Internal discrimination training is therefore the first attempt to learn through instrumented biofeedback. An improved self-awareness provides the basis for work toward better self-control. All throughout training the emphasis is on self-sufficiency and internal study, i.e. the instrumentation cannot be viewed simply as "treatment." The psychophysical consequencies of the training will therefore be self-

directed and will form the basis of a rewarding system for strengthening cognitive belief in and effects on the individual's reorientation toward the internal locus of control.

Work with the muscle, cardiovascular and central nervous functions are primary and form the basis of a more advanced form of instrumented biofeedback that consists of the matrixing of two or more biological functions into one source of integrated feedback which forms the basis for training the integrated patterns associated with psychophysical harmony mentioned above. The electromyogram (EMG) monitors minute electrical activity generated by skeletal muscle fibers maintaining normal tension and tone. This forms the basis for training muscular relaxation and isometric exercise. Skin temperature of the hands (TEMP) or photoplethysmogram (PPG) monitors cardiovascular tension controlling blood flow. Electroencephalogram (EEG) monitors various brainwave rhythms associated with a broad range of psychophysical states and offers the most potential for future applications. The MATRIX function integrates EMG, TEMP, or PPG, and EEG into one moving display that reflects a varying coherence between the individual sources of physiological variation. This system's information is far superior in terms of providing information that is meaningful to the person doing the training. This aspect of instrumented biofeedback training is therefore most closely associated with the training process in general.

There is always a significant time lag between the documentation of new technology and its application in areas where communication may be hampered and funding slow. The educational system is no exception to this predicament. It would therefore be desirable to downplay the initial importance of instrumentation and emphasize the "human software" nature of biofeedback from the beginning. A little cooperation can go a long way in establishing a free teacher training service that can provide an initial orientation to the field and train the simple and immediately effective skills of biofeedback not involving instrumentation. The consequences of such a program will be best left to the teachers themselves to decide. A sophisticated armamentarium of biofeedback machines and consultants can be standing by for when the time is right, but unless the more fundamental message about what biofeedback really is and how it should be applied is given a chance to find a home first, all the money and outside help in the world will fail, because biofeedback is an internal process that must be approached by the individual and for the individual. Freedom of information and the ability to know are traditional foundations of modern education. In this sense feedback is a basic human right and an invaluable tool in the quest for health, productivity and creativity through holistic education.

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Le biofeedback et l'éducation holistique

Cet article présente un résumé des origines du biofeedback et traite de son emploi dans le processus de l'éducation holistique.

Biofeedback in holistischer Ausbildung

Eine kurze Übersicht über Biofeedback liegt hier vor, und die gegenwärtige Anwendung davon im Ausbildungsvorgang wird erklärt.

"Biofeedback" en la educación total

Este trabajo comprende un breve antecedente de "biofeedback" y de como es usado en el proceso educacional.

J. of Suggestive-Accelerative Learning & Teaching, 1979, (4)1

Report on the Seminar on Suggestopedia of June, 1978, in Helsinki.

Kjell Weinius
Uppsala, Sweden

Abstract

This article is an extract from a lecture about the experiments at the grammar school in Tierp, Sweden.

Last spring there was a program about school on Swedish television. Being teachers we realized that the program showed the truth, and not a very flattering truth, about what happens in our schools today with our very traditional methods, developed during the last 200 years. Somebody asked a question here the day before yesterday, if there was not a risk that teaching according to the suggestopedic system could damage a student's personality. I would like to ask you a question that you do not have to answer here and now, but a question that you could take with you when you leave the seminar and think about at home. How many students' personalities do you think we traditional teachers, teaching according to a traditional method, have damaged or even destroyed? What kind of influence do you think we have on a student that all day long hears that he makes mistakes, that he is clumsy, that he is stupid, that he ought to do something else instead of studying?

Last autumn a demonstration was arranged by the University of Uppsala and Stockholm with the help of a number of sponsors. Unfortunately Professor Lozanov and Mrs. Gatewa had to cancel their trip to Stockholm at the last moment, but Dr. Gabriel Racle from Suggestopedia Canada, who was also invited, kindly helped to carry the conference through. He conducted a three-day course in French, the whole of which was videofilmed and can be purchased from the University of Stockholm, if Dr. Racle agrees to this.

Finally the first European Congress of Hypnosis was held in Malmo at the end of last month. At that congress there was a workshop in Suggestopedia, at which Professor Lozanov lectured and Mrs. Gatewa demonstrated the method by giving a three-day course in Italian. This was also videofilmed, but I do not know whether this film could be purchased or not. Anyway, on this occasion, Mrs. Gatewa used the new Italian Manual, the one with 850 new words in the first dialogue. I have a transcript of the whole workshop and it shows that the students did not feel tired during the three days. They were on the whole very positive in their comments.

As I already said, some teachers at the grammar school of Tierp decided to experiment last autumn. We got a sum of money from the National Board of Education and, what is more important, a letter

giving us the status of an experimental school. We were completely aware of the fact that we did not have a special training for this experiment, but we felt we could not wait any longer. We decided that the best thing would be to start the experiments with those students who began studying a new language at our school. Thus teaching according to the suggestopedic model has been practiced mainly in German and French. Spanish was included in the plans from the start, but unfortunately the teacher fell ill after the first period of experimentation, so that part of the project had to be cancelled. Our students were all about sixteen years old, they had studied English for six years and most of them had studied one other foreign language for three years. So what I will be talking about in the following presentation is their third foreign language.

One of the most important things in the suggestopedic model is the text. Dr. Lozanov stressed this, when we visited Sofia and we could also see this for ourselves when we studied parts of manuals used in Sofia. This has been the most difficult problem for us during this last year: the writing of the manual. And it has also been the reason why teaching according to suggestopedic principles has only taken place four times in each language. Although we have used already printed material as much as possible, we simply have not had the time to work out more manuals. After all these classes have only been about 1/5 of our total job.

During the first two weeks at school the teachers in French, German and Spanish who had the beginners, talked to the students about trying a new model for teaching and learning a language. As far as we could understand all students (i.e., 27 in French, 15 in German and 21 in Spanish) expressed a wish to participate in the project. It was then decided that we would start the experiments in the third and fourth week of the school year, after which we would thoroughly evaluate the results and the feelings of the students. The general procedure has been as follows:

We have had four lessons a week, each lesson of 35 minutes. Normally one manual has been worked through in four lessons.

Lesson one: The teacher reads through the text. The students each have a manual. The manual looks like the manuals we saw in Sofia, a sheet of paper with the French/German/Spanish text on the left and the Swedish translation on the right. The teacher makes the students repeat some frequent phrases, gives short explanations of grammatical constructions, gives word-for-word translations of phrases that have been translated in an idiomatic way into Swedish in the manual. After this the teacher asks the students to lean back as comfortably as they can on our quite common and not very comfortable plastic chairs, and starts the music. After a few minutes the teacher starts reading the text, while the music is being played. Of course we do not have the same facilities as in Sofia, where the playing of the music was controlled from another room. We have had to do all this ourselves with the help of the tape recorder in the classroom. The students still have their manuals and can follow the

reading. The music used has been the music recommended in various suggestopedic literature, such as Vivaldi, Mozart, Bach, Tschaikovsky, Beethoven. After this reading the manuals are collected, the students are asked once again to sit back and relax, while they listen to another reading. Once more music is played, this time a somewhat calmer piece by mainly the same composers as mentioned. That concludes the first lesson.

Before I go on with the following lessons I would like to give you the contents of the texts very briefly. In French and Spanish the first manual was about arriving at a hotel. Old friends meet, new acquaintances are being introduced. So it is easy to understand that these manuals contain a lot of useful phrases like: Bonjour. Quel est votre nom? Votre adress, s'il vous plait? Quelle est votre profession? Que tal? Muy bien, gracias, Encantado de conocerle, and so on and so forth. Questions and answers are exchanged. The second French dialogue was about a visit to a French cafe and restaurant, covering of course phrases used to order meals, etc. The third one takes place at the airport, the passport control, going by taxi. Finally the fourth manual is about four young people having a party in Paris, and it also covers famous sights in Paris and a little shopping vocabulary. The first German manual introduced two Swedes travelling to Germany to meet German friends, with phrases like, Guten Tag, Wie geht's Ihnen? Ich heisse Britt. Ich bin 16, und du? The second one was about a birthday party in which the students were given a hint about a future love affair between the Swedish girl and one of two very interested German boys. We have not yet seen the end of this story. The third manual taught the students words about checking into a hotel and the fourth took the students on an excursion into the country.

During the following lessons the text of the manual is elaborated in different ways. I will give you some examples of this.

During the first manual the students were given identity cards with names, addresses, nationality, date and place of birth, etc. to enable them to walk around, introduce themselves to other students and to ask them questions. The students were however not given a new identity to keep during the whole course. They played different parts every lesson. It would have been completely impossible to construct and to keep in memory 27 different parts for the French group, for instance.

In order to practice questions and answers a student was asked to throw a ball to another student, thereby asking him or her a question. The second student answered and threw the ball to another student with a new question. Short situational dialogues taken from the manual were practiced in pairs for a few minutes and then the students acted out the dialogue in front of the others. This is usually very difficult to make students do, at least in Sweden and at first they refused to do it. But after a short while they did it without hesitation. Many students commented on this afterwards, telling us the same things that we had noticed. At first they were shy, but after a while they got used to it and even liked it and thought it was very useful. One student even said that he liked to see

others making fools of themselves. When the students practiced the hotel manual, they were given a realistic form to fill in. Professor Lozanov has often stressed the importance of finding as realistic situations and realistic means as possible. In accordance with this a genuine French menu was given to the students, when they practiced the restaurant phrases.

Sometimes we made the students imagine that they were going to interview a famous person. So they all asked one student about things, personal things taken from the identity card, or other things.

Role-playing exercises have also been used. One example from French; the students were given some lines to speak in a conversation. Other students were given the other lines to make up a full conversation. They practiced first, then got together and tried to speak their lines in the correct order. In the beginning I used a transparent sheet with only certain words from a dialogue written on it. The students each played a part and tried to fill in the missing words.

Different exercises aiming at practicing the numerals have been used as well. Other exercises used during the lessons were songs, charades, questions on the text and listening comprehension.

It is difficult to give examples of all the exercises we have used. Most exercises are not new or typical only for this method, either. They have been used by language teachers for many years. But the aim of all the lessons has been to activate the students to express themselves with the words they have learned from the manual. It is also our impression that the students in fact have been more active than we are used to. This has also been their own impression.

As I earlier said, we decided to evaluate the experiment after the first manual. This was also done. The main question was whether the students wanted to carry on with this alternative method or not. All students without exception wanted to go on. This was of course very encouraging. So we had one week more before Christmas and two weeks during the spring term.

After the fourth manual we made another evaluation. This one was more extensive and in many questions the students were asked to make a comparison between the traditional method, which I must point out has been used 4/5 of the whole year, and the suggestopedic method, which has been used for the remaining 1/5. The principal elements in all language teaching are to teach the students to speak, read, write and understand the foreign language. At least in Sweden none of these elements is said to be more important than the others or is to prevail in the actual teaching. Students, however, when asked to rank these four skills, name speaking as the most important. This has been shown in a report recently published in Sweden. We asked our students the same question and we got the same answer. What the students really want to learn is to speak, to be able to express themselves in normal, everyday situations, to communicate with other people. Most students said that they wanted more suggestopedia because they felt they had been given

the opportunity of speaking more than usual. They also gave other reasons for wanting more of the method, such as (I quote)"It is more rewarding, it is great fun, because there is not too much grammar involved." (This remark is probably due to the fact that many students earlier in their language learning have tried to express themselves freely, but have been corrected severely by their teachers because they missed an ending or conjugated a verb in a wrong way, etc.) Other answers were: "you learn not to be afraid, it does not matter if you make a mistake, you learn not to be shy in front of others, you learn more useful phrases than normal. I like to play when learning, it is a good thing not to get any homework, but still learn a new language."

There were, however, also critical remarks among the students' answers. A few students were irritated by the many readings of the text, which they are not used to. One student complained about the music. The purpose of the music is of course to make the students more relaxed and to help them to concentrate, but this student said that he could not concentrate during the music session, quite the opposite, he started to think of other things instead. There could be a very natural explanation to this. Many young people at the age of 16-17 are simply not used to listening to classical music. Another student complained about the long texts. Again the reason for this could be that they are not used to such long texts and it may seem overwhelming for them.

But on the whole the students' reactions have been very favorable and positive. They have told us that they want to carry on next year and they have even volunteered to help us write new manuals. They have also stated that they would like to learn according to suggestopedic principles in other languages as well. One teacher tried the method for just a week with a group of adults learning German. It was extremely successful. One very shy student spoke more during that week than she had been doing during the whole term. And this group has especially asked to have this new method next year, when they start studying French.

This brings us to the most important question that we have asked ourselves after these experiments. How much, if anything, is suggestopedia in what we have done? Are the students' reactions positive just because they have encountered something new? We have tried to act as we saw the teachers in Bulgaria act. But is that enough? Is it really suggestopedia? Remember that Professor Lozanov has told us here that it is advisable that teachers get training in the method for two months. We have tried to compose manuals like the Bulgarian and Canadian ones we have seen. But are our manuals really written in a suggestopedic manner? What is suggestopedia?

It may seem somewhat impertinent to try to explain what suggestopedia is after Professor Lozanov's lectures here in Helsinki. I will not try to, either. I will just list a few things that we think are important in suggestopedia and also point out some problems that we still have not understood.

Basic for the suggestopedic system is the wish to release the

students from different kinds of anxiety and to make them feel more relaxed and to increase their confidence. We think that the anxiety for forgetting is reduced by many readings of the text and the instructions to listen without effort. The anxiety for not understanding is reduced by the written translation, which is something new. The fear for not finding words to express oneself with, is reduced by the many synonyms, the extensive vocabulary, much grammar from the start and the free exercises, and the fear of making mistakes by mild corrections. Many students are afraid of not being able to learn, which feeling is reduced by the guaranteed success through the method, the extensive material, that shows confidence in the student's ability and changes his belief system. Further more it is reduced by the fact that there is no homework or test in the usual sense. The new biographies help the students to forget social devaluation and a friendly teacher helps by taking away the fear of a pressured atmosphere.

Now, what we feel that we still do not fully understand is among other things, the following.

What part do intuition and instinct have? Not only in this method but in all teaching situations? How should one explain the authority of the teacher? How big a part does the body language play? This factor has been more closely studied in Sweden lately. I do not know if you have followed the political debates in Sweden between Mr. Falldin, our Prime Minister, and Mr. Palme, the leader of the opposition. When Mr. Palme tells Mr. Falldin: Now you listen to me, Mr. Falldin does exactly that. But when Mr. Falldin addresses Mr. Palme, he very deliberately turns his head in the opposite direction. That is probably because Mr. Palme can use his body very well when he is speaking, whereas Mr. Falldin cannot. Other questions we have: What situations arise during an intensive course and how does the teacher react to them? In what way are the different psychotherapeutical techniques involved in the system? Is it of great importance to vary the intonation during the first reading of the text to music? And of course how are teachers trained? Maybe all the answers will be found in Professor Lozanov's book. We hope so, but until then we are a bit out in the blue.

I have already pointed out that the biggest problem we have had is the writing of the manual. Professor Lozanov told us in Sofia that they had worked out their manuals during a very long time and they keep on improving them. We have had a very short time to do it. Some parts of our manuals we borrowed from other manuals we had seen, other parts were taken from books we used in Sweden in language teaching, and finally we have of course invented our own dialogues. And needless to say, we have learned by experience. After the first experimental period, we found that in our dialogues we did not include enough questions which made it difficult for the students to ask each other questions. We also found out that the sentences must be fairly short or it will be difficult to learn them. But above all it is extremely difficult, when you are not a professional text writer, to make interesting texts.

Another big problem that I have already mentioned is the Swedish authorities. We are of course grateful that a conference was arranged with Professor Lozanov, that a demonstration with Dr. Racle was held, and that the Swedish National Board of Education asked us to make experiments at our school. But what we really want is a teachers' training course in Sweden. We applied for money for a course to take place this summer, but the answer was, "No, no money." You have to apply for money two years in advance. But we will have another try. Since we do not have any psychotherapeutical training, we would also like the experiments to be carried out in a more scientific manner with the help of experts in psychology, psychotherapy, etc.

I will briefly mention a few other problems that may arise in Finland, too. As I said we have had four lessons a week with our classes. These lessons are on Mondays, Tuesdays, Thursdays, and Fridays, spread out over the whole week. The lessons are not at the same time every day. On Tuesdays, for instance, their last lesson is before lunch and they have had physical education the lesson before. This means that they are usually late for our lessons and they are very hungry. On Thursdays, the lesson is in the afternoon after a lesson of activities. Our students have at least ten different subjects to concentrate on during their first year at our school. The breaks are usually short and they have to rush from one classroom to another. As you understand it might be very difficult to create a relaxed and creative atmosphere in the classroom during one lesson out of seven every day.

One feature in the suggestopedic systems is the position of the chairs, i.e. to place the chairs in a semi-circle. This creates a more relaxed and cozy atmosphere. Since we do not have a special classroom for suggestopedic teaching, we have been forced to put the chairs in a semi-circle before every lesson and then back again after the lesson, and sometimes there is only a five-minute break between the lessons. The French group with 27 students have mostly been in an assembly hall during their lessons.

Another problem that we do not know how to solve, is when a student is absent, particularly when he is absent from the first lesson with the presentation of the text. This caused problems in one of the German groups for instance. When the students come to our school, they normally do not know many of their new classmates. Besides, language groups are often made up of students from four classes, since our school is quite small. This has made the students even shyer and more quiet in front of each other. Teaching according to the suggestopedic system has however improved the relations between the students and they have after a while gained confidence in themselves.

Finally a few words about our plans for the future, and some of the minor problems we hope to solve next year. But what to do with only four lessons a week? Well, one suggestion is to concentrate the teaching of the new language in only one term and thereby get eight lessons a week. But that means that at least one other subject must be concentrat-

ed in the other term. We have to look into that problem, to find the right subject and also find other teachers willing to concentrate their teaching like this. Two bigger problems need careful attention and this very soon: teachers' training and the writing of manuals. We will try once more to convince the authorities of the necessity to arrange a training course in Sweden, perhaps it might be possible to cooperate with you here in Finland. As for the manuals we would really appreciate it, if we could help each other by exchanging ideas.

In Sweden we have plans to form a national Society of Suggestology. We are sure there is enough interest.

What we have accomplished in Tierp at our school so far may not seem very much. And it is not either. But just this fact that we, a few normal, everyday teachers, with quite a normal education have dared to enter this new field that might seem very vast and overwhelming at first sight, I hope will give you the encouragement to start experiments of your own. To paraphrase Sir Winston Churchill, we have not seen the end of this yet, it is not even the beginning of the end, but it may be the end of the beginning.

Rapport sur le séminaire pour l'étude de la Suggestopédie (juin 1978) à Helsinki

Cet article comprend un extrait d'une conférence faite sur les expériences suggestopédiques menées à l'école secondaire à Tierp, en Suède.

Bericht über das Suggestopädieseminar im Juni 1978 in Helsinki

Der Artikel ist ein Auszug aus einem Vortrag über die Versuche auf der Grundschule in Tierp, Schweden.

Reporte del Seminario de Sugestopedia de Junio de 1978 en Helsink. Este artículo es un resumen de la conferencia sobre los experimentos realizados en la escuela elemental de Tierp, Suecia.

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Suggestology and Suggestopedia Revisited

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Abstract

This article deals with the principles and practice of suggestopedia of Dr. Georgi Lozanov. Also, a detailed account of how suggestopedia is used in learning foreign languages and what the results are is included.

In December, 1978, I was one of three United States delegates invited to an international conference in Sofia, Bulgaria, sponsored by UNESCO, on "Suggestology and Suggestopedia, Theory and Practice." During a previous visit in September, 1978, I had spent two solid weeks of observation of both the foreign language and school programs and had many occasions for discussion with Dr. Georgi Lozanov, the founder of the new system, both in theory and application.

Suggestopedia, as a teaching method, was already being employed experimentally in Bulgaria, USSR, Austria, France, German Democratic Republic, Poland, Sweden, Japan, Hungary, Canada and the United States. Delegates and observers from most of these and other countries met to discuss the theory and evaluate the practical results of the methodology. After five days of deliberations based on review of research and literature, on the evidence of test experts, on classroom and film observation, consensus was arrived at that "Suggestopedia is generally superior as a teaching method for many subjects and for many types of students, compared with traditional methods" (Schuster and Miele, 1978). This overall finding was further corraborated by testimony from one country after another indicating how the therapeutic climate, the joy of learning produced under suggestopedic teaching tended not only to accelerate the learning but also to bring about constructive psychological change in the learner, often with stable results.

In our country, according to the Mortality Branch of the National Center for Health Statistics, 1306 children between the ages of ten and fourteen took their own lives between 1968 and 1976 (Jerome, 1979). The National Institute of Mental Health claims one out of five children is suffering from depression. All kinds of factors are held responsible from home environment to "genetic loading." Certainly there are many causative factors, yet one of the most important is rarely mentioned. Over and above broken homes and neurotic parents, five hours of a child's day may be spent in fearing failure, fearing the test, the recitation, the teacher's scolding, the threats of punishment, of suspension, fearing competition with peers, fearing their scorn, feeling guilt and

shame at failing to live up to the expectations of parent and teacher. Day in and day out, school becomes a prison of negative emotions which lead to mental depression, to suppression of children's development and too often-suicide. Dr. Georgi Lozanov has a term for this type of illness - didactogeny. More important, he has a program for its prevention - Suggestopedia.

But the stir that Suggestopedia has created both in educational and other areas, in the natural as well as the behavioral sciences spreads far beyond its highly successful results wherever practiced. The method rests upon a new science of Suggestion, founded by Dr. Lozanov and believed by a growing school of natural and behavioral scientists to be a dialectical-materialist global approach to human communication. This science views suggestion as a form of psychological reflection, a universal phenomenon subject to control. Dr. Lozanov analyzes both conscious and unconscious forms of human information processes in the light of their dialectical unity. Stemming from this unity, suggestion offers vast possiblities for tapping the reserves of the individual and consciously employing these reserves in the service of human development.

Psychological processes assume scientific validity when they are rooted in their materialist base - the anatomy and physiology of the brain. Psycholophysiologists are universally aware of how Pavlovian conditional reflex theory has employed cortical excitation aroused by certain stimuli to explain how associations are formed in the brain. Such associations enable the organism to learn to respond to hitherto neutral stimuli. Unfortunately, Pavlov's work with cortical inhibition or the suppression of nerve cell function in higher nervous activity has gone unnoticed. Those scientists, however, who are interested in hypnosis or more generally in altered states of consciousness have given this aspect of Pavlov's work their careful attention (Platonov, 1959).

Early in his career, Lozanov studied Pavlov's key neurological paradoxes of cortical excitation and inhibition using dialectical materialist principles and methods. He analyzed phenomena developmentally as processes in motion and change. He studied the internal contradictions within such polarities as conscious and unconscious, the elemental and global, reason and emotion, suggestion and desuggestion. Like Lev Vygotsky in his own methodological study of consciousness, Lozanov was concerned with presenting the basic principles of his suggestologic theory and method not descriptively but in explanation of processes, revealing the dialectical relations underlying phenomena. Mere description of outer manifestations of experience is not science. Vygotsky brilliantly for his time analyzed consciousness as a social-historical process reflected in the development of complex functional processes in the brain. But for Lozanov there is no conscious without an unconscious, and no unconscious without the conscious. His extension of consciousness interacting at every moment with the unconscious in effect changes the nature and processes of consciousness itself. If to Vygotsky (1962), a "word is a microcosm of human consciouness," to Lozanov, the total act

of communication including its nonverbal as well as verbal aspects, appears to be the microcosm of suggestion.

Lozanov often refers to Pavlov's theory of cortical inhibition as the basis for his study of unconscious states. Pavlov explained hypnosis and rapport as a

> "state in which the cerebral hemispheres are not wholly embraced by inhibition, since certain points of excitation may be formed in them. At the same time, inhibition of the rest of the cortex is intensified (by negative induction), thus abolishing a' competing effects of contemporary stimuli. This accounts for the large and practically insurmountable influence of suggestion as a stimulus during hypnosis as well as shortly after it" (1964).

In the field of physiology, D. Mateev, Director of the Institute of Physiology at the Bulgarian Academy of Sciences, points to corroborative evidence for the mechanism of suggestion in the work of Soviet physiologist Ukhtomsky. Mateev (1973) believes that on a neurophysiological level, Suggestology and Suggestopedia represent a "turning point towards a new genuine Pavlovian age of the development of pedagogy on sound natural science foundations." He goes on to describe the work of Ukhtomsky who discovered the physiological "mechanism of the dominant." The theory underlying this mechanism stemmed from the physiologist's analysis of the act of defecation of an animal. He observed that, while engaged in this act, all side stimulation of the skin, eyesight or hearing remain without the usual reflectory response, but they increase and speed up the basic act of defecation itself. Generalized to many human functions, this mechanism involving the two key paradoxical processes of excitation and inhibition proved of great benefit first to clinical medicine, now as valid for the highest cortical structures of the spinal cord. In agreement with Lozanov, Mateev (1973) differentiates between "the dominant focus" (suggestion) and hypnosis in these terms:

> "What is the basic difference between the dominant focus and hypnosis, however, is the increased capacity of work of the cerebral structures of the dominant focus. While in hypnosis we have no working consciousness as a state of wakefulness at all, there is present in the dominant an especially fruitful work of consciousness in a state of intensified intellectual and emotional capacity for work and efficiency, namely in the sphere which is the subject of dominant thinking."

In practice, foreign language instruction, taught suggestopedically to students tired after a day's work, does in fact rest and relax them while expanding their ability to memorize vocabulary with no strain at all.

From a Soviet source comes support for the enormous importance of the unconscious and the conscious-unconscious relationship employing very different research. D.N. Uznadze (1966) describes a unique series of experiments involving multisensory illusions. From them he concludes that both conscious and unconscious experiences may take place under the influence of psychological set which, in itself, he does not consider to be a component of consciousness. "The important role of the unconscious in human mental activity," he asserts, "undoubtedly rests on a very firm basis." He goes on to state:

"The concept of the "unconscious" ceases to be purely a negative concept (which he ascribes to the Freudian unconscious. CP), but acquires a full positive significance and must be analyzed in science on the basis of ordinary methods of investigation."

The relationship between the conscious and the unconscious continues to be a subject for study. While surgically treating patients suffering from temporal lobe seizures, Wilder Penfield (1975),an American neurosurgeon, describes how electrical stimulation of the interpretive areas of the cortex brought to consciousness material that patient had stored in her unconscious over many years. This was due, he said, to

"electrical activations of the sequential record...laid down during the patient's earlier experience. The patient relived all that she had been aware of in that earlier period of time as in a moving-picture flashback."

As a psychiatrist who employed hypnosis in the 1950's and 60's, Lozanov studied the potency of suggestion under hypnosis as well as in the conscious state. His research convinced him that, under certain conditions, suggestion on a conscious level can be just as powerful, calling forth reserves of the unconscious. He refers to suggestion and hypnosis as

"two different phemonema no matter that they may be genetically linked...The unconscious psychic activity within which suggestion takes place is at hand during all and any states of the individual - states of wakefulness, sleep, hypnosis, gloom, etc." (1973).

The separation of hypnosis and suggestion in a conscious state is corroborated by Theodore Barber, an American psychologist. After twenty years of research comparing variables generally associated with hypnosis and those of the waking state, he indicates that appropriately disposed subjects do not need hypnotic induction to carry out typical behaviors historically associated with the word "hypnosis." He and his co-authors (Barber, Spanos & Chavez, 1974) assert that

"It has been traditionally assumed that subjects manifest "hypnotic" behavior when they are in a special state - "hypnotic trance"...we present a cognitive-behavioral theory that challenges the traditional viewpoint. Our theory views concepts such as "hypnotized", "hypnotic state", and "hypnotic trance" as misleading, as not helpful in explaining the behaviors historically associated with hypnotism. From our viewpoint, subjects carry out "hypnotic" behaviors when they have positive attitudes, motivations, and expectancies toward the test situation and, consequently, when they are willing to think and imagine with the themes that are suggested."

Lozanov delineates three principles governing suggestion which he calls a "universal communicative factor": Principles to which he refers again and again as he applies them to different aspects of practice. The first is: *Interpersonal communication and mental activity are always conscious and paraconcious at the same time.* In his term "paraconscious," Lozanov includes every mental state outside the scope of consciousness such as peripheral perceptions, emotional stimuli,

different variants and levels of the unconscious. Also included are all non-verbal automated activities in their mental reflections as well as instincts of an archaic heritage which unconsciously influence suggestion. The paraconscious also comprises unconscious automated elements within conscious mental activity, automatized codes and symbols, the whole area of subliminal stimuli as well as the unconscious aspects of creativity, of intuition and inspiration. All of these subtle paraconscious factors "penetrate each other and participate in the suggestive process."

The second principle is: *Every stimulus is associated, coded, symbolized and generalized.* This principle describes the process dealing with hierarchical levels of abstraction. Original conscious levels of perceptions and ideas, of lower level abstract generalizations are continuously being pressed into the paraconscious to make room for higher level codes and symbols. None of these is lost, however, but continue to exert their influence on new functional formations. For example, we are aware of how emotional stimuli, considered to be one of the most archaic forms of communication and information processing can influence concrete and concentrated creative functioning.

The third principle is that *every kind of perceptual input is complex.* Here again, he deals with the conscious-paraconscious interpenetration. In real life, stimuli are not absorbed singly as they might be in the laboratory. A "simple" act of verbal communication is far from simple. Consciousness, with its limited scope, is unable to absorb all the components of a communication at once. Its non-verbal elements, its gestures, voice, facial expressions, etc. become peripheral perceptions and do not reach consciousness but influence it nevertheless. These peripheral perceptions as well as the emotional stimuli are mechanisms which are of fundamental importance both in the theory and practice of Suggestopedia (1978).

Since suggestion takes place when the ultimate effect is the activation of certain reserves of the individual, what does Lozanov (1973) consider to be the reserves of the individual? Hypermnesia or supermemory and psychogenic anaesthetization are two examples of unusual capacities possessed by individuals. Historically these and others have been known and practiced by ancient schools of philosophy. Modern psychological research and practice are discovering others. The yogis of India believed the individual capable of memorizing a great deal more material than the "social norm" by employing certain ritual and psychological strategies. Among the brahmins, the most talented were selected when young children to have their memory trained in order to memorize the vast amount of ancient teachings of that time. Individual capacities of this type were concealed behind the veil of mysticism, in this way depriving the masses of people of their enormous potentials for human development. Dr. Lozanov voices a note of optimism for our own times:

"Today", he says, "when the scientific outlook and scientific approach to all phenomena are being applied on an increasingly broader scale, there exist more favorable conditions for large scale utilization of the reserves of the individual....Even today however, the experimen-

tation with and utilization of these capacities is in collision with the socially accepted suggestive norm which is to a large extent backed by conservatism, by fear of the mystic, by fear of the new...."

It was with the goal of developing individual reserves on a broad social basis that Lozanov moved into the sphere of education which he calls "Suggestopedia." He sees modern education as beset with many problems, and many delimiting and harmful effects on learners. The need for even greater sophisticated knowledge in science and technology demands accelerated learning per unit-time without additionally burdening the nervous sytem of children. Despite minor improvements here and there, he sees children over-fatigued, bored and alienated. He sees the prevalence of neurotic conditions, of phobias around learning situations which dogged children into adulthood. He sees illness and suppression of children's development. He sees them without confidence in their abilities. Instead of satisfying their natural thirst for knowledge, education has been turned for them into a psychotrauma.

What he set himself to do was nothing less than a reconstruction of educational science based not only on sound whole-brain learning theory, but also on mental health principles. Suggestopedia, he reminds us, stems from psychotherapy. With the experience of many years of using suggestion successfully to cure his patients' mental and emotional ills, he adapted it to the field of education. He argued that if suggestion was the basic mechanism for freeing the reserves of the patient in a clinical setting, it must also play a part in every communicative process in and out of the classroom. He knew that suggestion with its paraconscious factor was particularly intensified and well-organized in such right-hemisphere activities as art, music, dramatics, puppetry, poetry, etc. Together with his staff, he utilized and organized the unconscious suggestive factors inherent in these activities within the learning process with the view to heighten motivation and evoke the reserves or the potential capacities of the mind. But dialectically, suggestion is interpenetrated with its opposite, desuggestion. Properly used in teaching, suggestopedia cannot occur without simultaneously freeing the paraconscious from the inertia of the suggestive status-quo, the social norm. This is the desuggestive limiting process. In our society, for example, we place a ceiling on our expectations of children's potentials through our unscientific reliance on intelligence testing. Based on assumptions stemming from intelligence testing, IQ thinking categorizes children into good and poor learners according to their "innate intelligence" as measured for the most part by these tests. Though IQ theory, based on biological determinism, has been effectively discredited by many social scientists (Deutsch, 1953, Kagan, 1969, Voyat, 1970, Thomas & Sillen, 1973, Valentine, 1975), its destructive effects continue to influence our teacher-training institutions and the minds and attitudes of many teachers. IQ thinking moulds our belief system, fixing human potential to a low social norm, creating limited personalities. Especially with minority children do teachers' restricted expectations of their pupils' potentials negatively

affect their motivation, attitudes and psychological set - all on a paraconscious level. These personality factors unconsciously build up antisuggestive barriers. Immobilized by the limitations of many social suggestive norms, we do not believe it possible to expand our memories or accelerate our creative development.

Over and above the tendency of school people to give up on children with "low potential," school teaching itself is relevant in most instances to one aspect of human functioning. Most school teaching addresses itself only to the left hemisphere of the brain, the hemisphere of language, of abstract reasoning, as though the learner were devoid of emotion or motivation. It ignores the right hemisphere of the dreamer, the intuitive, the creative, the metaphoric. Suggestopedia directs its process globally, to all parts of the brain simultaneously: the subcortical-reticular (emotional) stage, the concrete-image (visual) stage, the abstract-logical (cybernetic) stage. According to Lozanov (1975),

> "There is no case where the brain functions only with its cortical structures or only with the subcortex. The functional unity of the cortical-subcortical system and the reticular formation is indissoluble. This means that in teaching practice, the emotional-motivational complex, the psychological set (expectation), the imaginary thinking and logical abstraction should be simultaneously activated in complex and indivisible unity. Teaching must be global."

Suggestopedia was first researched and then used in the teaching of foreign languages at the Institute of Suggestology in Sophia. From 1965 to 1970, 1800 adults learned a foreign language in thirty days. They emerged with the ability to fluently communicate in the learned language with a vocabulary of 2500 words. Furthermore, the students found the course relaxing and pleasant. Some found that their anxieties, depressions and other neurotic symptoms had either disappeared or were ameliorated after taking the course. Suggestopedia in the teaching of foreign languages is now being used successfully with approximately the same educational and therapeutic results in both eastern European countries and the west, including the United States and Canada.

In Bulgarian schools, the suggestopedic method has been researched since 1970 on a constantly expanding level. Initially, the suggestopedic classes were limited to the kindergarten, the first and second grades. More recently, research is extending to the upper grades. Experimental classes are required to cover the standard curriculum minimally by the Ministry of Education. Results have consistently indicated, however, that learning is accelerated with the children covering more work, learning more skills in a shorter period of time in the experimental schools. From two experimental schools in 1973, research has now been broadened to involve thirty schools throughout the country in rural as well as urban areas. To test the system's applicability to minority groups, the experimental population includes children of the gypsy culture as well as Turkish speaking children. The Ministry of Public Education provided for a thorough-going assessment of the

pedagogic results as well as the children's development by a multi-disciplinary team of one hundred specialists including physicians, physiologists, psychiatrists, school psychologists and educators. The reports of the specialists supported the significant results. The children in the experimental schools were indeed learning their skills more effectively at an accelerated pace. More importantly, they were relaxed, were actually enjoying the learning process and were evidencing better therapeutic, mental and physiological development.

In 1976, a national conference was held involving the Ministers of Health, Education and Culture. Suggestopedia had succeeded in demonstrating, in practice, the integration of all areas of child growth. The importance of the arts in the process was stressed and an experimental school was set up to enrich the curriculum with all the arts in addition to the traditional subjects as a way of stimulating personality development more quickly (1977). In the planning stage to be implemented in the Fall of 1979, is a one-month program of suggestopedically teaching all high school entrants their choice of a foreign language prior to undertaking the high school curriculum (Lozanov, 1978).

In September of 1978, I was invited to observe the work being done in the schools as well as at the Institute of Suggestology in Sofia. In an agricultural community near Plovdiv where Turkish is the dominant language, the investigator observed suggestopedic teaching in a first-grade class. The lesson in reading, integrating some mathematical concepts of sets and subsets applied to letters and words, was a delight to watch. The enjoyment of the children in the act of solid, basic skill learning was obvious. The lesson was similar in its goals to an analogous lesson observed in a suggestopedic class observed in Sofia, yet very different in approach. Asked if she had learned specific teaching techniques at the Suggestopedic Teaching-Training sessions, she replied, "No, we learned the principles and then apply them to what is familiar to our children in their own lives." In her lesson, she had creatively appealed to the children's life experiences in a rural community. At one point, she drew a curtain back from a blackboard to reveal a colorful collage of a scene representing a school in the forest. The forest school was a giant polka-dotted mushroom, surrounded by forest animal characters. In the story the children were learning to read. Each animal was doing something else: reading a book, doing a sum, eating an ice-cream cone, sleeping, etc. - all of these activities verbally described in their story. There was no trace of conventional recitations or rote. Instead, there were riddles and competitions, songs and poems. Haydn's Children's Symphony was piped into the classroom while the teacher was telling a story or while the children were writing what they had learned. At the end of the lesson, each child was given a real autumn leaf with a word or sentence from the lesson scotch-taped on it. These were to figure in a prize-winning competition the next day.

But what were these basic principles of Suggestopedic teaching to which the Plovdiv teacher referred? These were the same principles

applied by the foreign language teachers applied at the Institute with vastly different content and population. In his book (1978) Lozanov elaborates on three suggestopedic principles which, in essence, are implementations of his basic laws of Suggestology. The first teaching principle which should be the goal of each lesson is: *Enjoyment of learning and absence of tension.* But isn't this what educators from time immemorial have been talking about? The difference here is that Suggestopedia describes how this goal is to be attained. Whether with adults or children, the content of what is being taught is incorporated into a play-learning system of education, entertainment and growth-producing activities. Psychological relaxation and positive emotions permeate all activities. Songs are frequent, classical music is dominant. "Concert sessions" with the teacher intoning vocabulary in the context of prepared scripts make up an important part of foreign-language lessons. This is a "pseudo-passive" phase of the lesson in which new vocabulary is learned via peripheral perception on an alpha brain-wave level. The question was asked of Dr. Lozanov, "How can you prove that the admittedly unusually large amount of vocabulary memorized by the students during the paraconscious or concert phase of the lesson is not just the result of good teaching on a conscious level?" Dr. Lozanov referred to new data derived from the research being done at his Institute. These contrasted the relationship between memory curves of material learned on a purely conscious level with those on peripheral paraconscious level. On a conscious level, the memory curve drops steeply shortly after memorization. Where the paraconscious is involved, the memory curve, at first lower, increases spontaneously without reinforcement even with nonsense syllables. Lozanov calls this memory curve the "curve of recollection," and says, "Our studies have shown that this peripheral unconscious information rests at the basis of long-term memory (1975)."

Analogously, in the primary school, the curriculum of a grade is divided into segments or "global themes." Each global theme is introduced by a delightful children's television operetta, specially produced by the National Television Network with the cooperation of the Bulgarian Opera Company. The material of the performance is a mix of curriculum content to be taught deductively, with classical music, dance and art. Later, in the classroom, inductive approaches are applied. The simultaneity of deductive and inductive with the same material is stressed.

In beginning reading, peripheral perception is used very effectively. For the first two days of the term, decorative posters are hung depicting animals with labelling words and sentences printed underneath. The initial letter of the word is embedded half-hidden in the picture. No attention is called to the posters. On the third day, the pictures are covered, the words and sentences left revealed. Games and riddles follow using the revealed vocabulary. "It runs in the attic. It eats cheese. What is it?" A child runs excitedly to the word "mouse." He remembers peripherally the picure of the mouse. "What is the first letter? Have we

seen it before?" The child points to another word beginning with the same letter, etc. From the beginning, the whole word is taught together with its elements, the letters and their sounds, with the emphasis on the sense-bearing word. When the primer is first distributed, the teacher announces, "This is one of the happiest days of our lives for today we are learning to read." Teacher and children scan the book discussing the pictures as they related to the children's experiences. Amid the excitement of looking through their first reading book, the teacher says, "Close your books now. If you want very much to read the book, I will give it to you as a present. But now, let us listen to a song about books and then, if you like, we can learn the song":

I have many books with fairy tales and songs.
They are my true and dear friends.
I keep them clean. I often peep into them.
Secrets are hidden there.
I will come to know them.
They will open paths to infinity for me.
I will gain wisdom. I will be strong.
And then I will cross the threshold.
I will fly into outer space to see and know it.

While enjoyment of learning and absence of tension are experienced by the learner in such activities as listening to concerts or watching TV operettas, Lozanov's second principle of global interaction is simultaneously being implemented - *the unity of the conscious and the paraconscious*. Logic is integrated with emotional stimulation, the central conscious with the peripheral paraconscious, the right and left hemispheres. Here there is freedom in the process of learning similar to the emotional climate existing in group psychotherapy. At the Institute, even the first lesson of a class in English, upon analysis, integrates aspects of the conscious and paraconscious. Role-playing begins. Bulgarian adult students are given a new English-speaking identity to be retained for the entire course. They find it fun to be communicating with each other or in skits using their ever-increasing vocabulary. They may practice immediate response by throwing a ball to each other asking simultaneously in English, "Who are you? Where are you from? What is your profession?" The responses come quickly, "I am Alan Black. I am from Canada. I am an actor." (It should be noted that short "a" is not a sound in the Bulgarian language). As the students play their roles, sing and engage in games, they learn not knowledge about the foreign language, but mastery of speech skills. Lozanov is of that school of psycholinguistic though expressed by A. A. Leontiev, a foremost linguist (1978) of the Soviet Union who agrees with and supports Suggestopedia in the teaching of foreign languages. In an issue of *Soviet Psychology* devoted to essays on Psycholinguistics by Leontiev, he quotes from F. L. Billouz (1973) on learning a second language:

"If we study a language...by concentrating on the language as such and not on the way it influences the listener...we will scarcely attain fluency in the use of the language; we will scarcely free ourselves of the necessity of exerting effort."

Suggestopedia is constantly being studied to further pedagogic goals. It is also being studied in its psychophysiological aspect. The investigator was invited into a laboratory at the Institute where a psychophysiologist demonstrated EEG metrical recordings during the study process. She analyzed the distribution of brain waves at different moments of the session. All investigations show that when beta (conscious activity) is increased, fatigue increases. On the alpha level, cortical inhibition increases and feelings of rest and relaxation during learning take place. These studies enabled Dr. Lozanov to verify the dominance of the alpha level in the concert phase. "In the alpha state", he explained, "peripheral perceptions become powerful stimuli. Such paraconscious learning is accelerated because of the positive emotional-motivational processes involved." This was the logic behind the strategy, in Suggestopedia, to use art and music to influence the paraconscious aesthetically as well as pedagogically.

Many years ago Vygotsky (1971) recognized the relationship of art and the unconscious. As far back as 1931, he said,

> "We are not likely to find a solution to the fundamental problems of the psychology of art if we confine ourselves to analyzing processes that occur only at the conscious level."

The third principle of Suggestopedia, inter-related at all times with the first two, is the *Suggestic Link*. This principle, briefly referred to above, would change the believing system of the students from the old social norm of low potential to one in which they believe they can learn more, more effectively and with less fatigue. This is the process of desuggestion which begins from the first moment of the suggestopedic course. In an Italian language class, for instance, the students' first instructions were "You will learn 850 new words today. Tomorrow you will begin activating this vocabulary. You will have new biographies for the duration of the course. Only the secretary knows your real names. You will participate with your new names and new roles and find yourselves remembering and using the vocabulary you have learned. You will make mistakes, but don't be afraid of making mistakes...." Three days later, the students were indeed play-acting their new roles, participating in games, but using the Italian vocabulary they had learned, making mistakes and laughing at them.

It seemed to me that teachers' retraining had to be complete to include basic personality traits as well as pedagogy. Dr. Lozanov's training does very much include the psychological, the didactic and the artistic aspects as the means by which Suggestopedia can be successfully taught. While such training does not involve becoming psychologists, potential teachers must learn to have psychotherapeutic attitudes toward their students. They must become masters in the art of employing positive suggestion even in the most negative of situations. While they learn theory, they are expected to adapt its theoretical principles to what are familiar experiences in the lives of their students. They are helped in concretizing their learning by demonstrations of master

teachers followed by practical workshops. The theoretical and practical training they receive enables them to consciously employ emotional stimuli and peripheral perception which are considered to be basic factors in suggestopedic teaching because of their unconscious role in active and passive attention. Teachers are taught how to employ harmonious intonation and rhythm during the concert phases so that the students may not only listen to the vocabulary (first plane process) but are also influenced by subtle changes in facial expression, intonation, gestures and other non-verbal factors (second plane process). "Infantilization," not to be confused with immature behavior, is a quality to be encouraged in students. It is characterized by a childlike openness to the learning process often lost in adults. It is evidenced by the fun that mature adults seem to be having in playing games, singing songs and role playing with a foreign language in the process of being learned. This feeling stems from the teacher's "authority", used here in the sense of having the prestige of knowledge and not in the disciplinary sense at all.

Teachers must learn "didactic means" in a new way as well - a dialectical way. In the old way, (and in all the control classes observed), elements are analyzed and studied in isolation from the sense-bearing whole. Elements must become automatic through tiring drill before they can be connected systematically to form meaning. Phonics are studied this way in most phonetic languages. Polarized at the other end, the whole word or sentence is studied with little or no attention to its components. Both are considered by Dr. Lozanov to be incorrect. On a physiological level, analytical-synthetic activity normally is accomplished simultaneously. Reflected in suggestopedic teaching, simultaneity of these processes is expressed in material; being taught from the general to the specific (but as an element of the general) and back to the general (involving structural unity of the elements).

In our country, attempts to mechanize and program instruction have been made, both in audio-visual foreign-language labs and teaching machines in the classroom. Communication with machines is believed by Dr. Lozanov to isolate the student from his social learning environment and the richness of emotion provided by the group. The student's isolation only reinforces his or her negative attitudes toward learning.

Lozanov is equally critical of the type of "open education" which has adopted the other extreme of permitting full freedom for the pupil in choosing what and how he is to learn. In practice, this robs his education of its necessary structure but does not free him from his inner fear of his own limited abilities to learn. "Freedom accompanied with fear of learning is equal to giving up learning" (1978).

"If an educational system succeeds in liberating the pupil from fear and from the routine social suggestive norm of his limited powers and is brought into line with psychophysiology, it will easily achieve its other pedagogical aims. But the difficulty arises not so much from considering how to bring about the initial liberation, but how to create a system of sustained, continuous inner liberation. The pupil's confidence in his or her own capacities for learning should grow constantly and in this way instruction gradually develops into self-instruction" (1978).

Suggestopedic teachers are trained in the "didactic means" of greatly enlarging units of teaching so that one lesson might include the global generalization of material ordinarily taught in five to ten or more lessons. While the students' attention is drawn to the global sense of the generalization, his peripheral perceptions also process the implied elements included in the generalization. For example, in the concert phase of the foreign language lesson, 850 words are intoned to the accompaniment of selected classical music, but in the context of meaningful communication of amusing life situations. In employing the vocabulary the next day, the student's attention is drawn only for a moment to the appropriate pronunciation or grammar involved, but quickly returned to the sense of the whole sentence and situation. Elements are often learned as part of the whole structure in a self-directed "second plane" level.

The final suggestopedic component in teacher-training described by Dr. Lozanov is the "artistic means" mentioned above in another context. The forms they take of music, art, literature and poetry, dramatics and role-playing are not separate or illustrative aspects of material taught but must be built into the contents of the lesson. Undoubtedly, they create a pleasant climate conducive to assimilating the contents of the lesson. Even more important is the role of the arts in tapping the reserves of the paraconscious. Used suggestopedically, they become a powerful attitudinal and motivational stimulus for memorizing and learning a great deal more than the expected social norms. Lozanov calls art the "visual representation of suggestion. For is art not the greatest form of suggestion?" (1978). Artistic means are employed in teaching children all their subjects. Even in math, for example, the teacher begins with the performance, the story, the song - the global message. She then follows with the didactic material and then again and again, back to meaningful play, to art, to the emotions. With maturity and experience, she learns how to integrate subjects, finding links with her pupils' real life activities. This kind of integration is reflected in the textbooks. The pages of the beginning math book, for instance, are covered with pictures, with songs and stories portraying scenes of home, family, parents at work, children at school. But imbedded in all these busy pages are mathematical concepts the child absorbs as peripheral perception.

Again and again Dr. Lozanov repeats that suggestopedic principles cannot be applied independently. At each phase of the educational process, one aspect may be dominant but it is always interconnected with the other aspects. This investigator was deeply impressed with his understanding of how processes were transformed into dialectical laws of change on a psychological level and applied in the classroom. Children's development was not seen as a regular stage-oriented evolutionary process but as complex qualitative transformations of one form of behavior to another. He envisioned a stage of self-directed learning emerging from suggestopedic teaching of children in their elementary

schooling. He described this stage as one in which more advanced students, free from the fear of learning, would become so deeply motivated by a natural thirst for knowledge that their need for teachers would become limited to that of facilitators or advisors. One could not observe suggestopedia in practice whether with children or adults or whatever the content, without realizing how carefully designed was every single activity or communication, every element in its dialectical relationship with the whole.

Certainly, there is the other side of the coin of which we must be aware. A crisis in the classroom reflects a crisis in the social order. Under adverse environmental conditions, under reactionary, anti-human control, elements of suggestology are misused and may generate destructive and harmful effects as in brain-washing. Children - and adults - become brain-washed into believing distortions of political and social realities such as racist, sexist or militarist ideas. In the field of advertising, Americans are driven to the use of paraconsciously advertised products which may cause illness. They join cults which tend to degrade and enslave them, all to the tune of mindless gut-emotive suggestion. But it is precisely because suggestion can be employed for such dehumanizing purposes that scientific understanding of its processes is critical. Dr. Lozanov finds a basic internal contradiction in the argument of those who, on one hand, admit the omnipresence of suggestion in our lives from birth to death, but who, on the other hand allege that "it is a dangerous phenomenon which degrades, debases and nearly kills." Dr. Lozanov (1973) comments,

> "It is then interesting to know why, despite this, there is human progress. It is true that suggestion is a universal means. It is true that sometimes suggestion has been used to bar human development. But is it not for the same reason that we should take up this weapon, free it from the unorganized use and employ it for creation, to stimulate human progress."

Throughout his writings, Dr. Lozanov emphasizes that it is knowledge of the scientific principles of Suggestology that makes it possible to wage organized opposition against negative and destructive effects of suggestion and against those applications of it which deprive the individual of his freedom.

We stand at the frontiers of a new science, the science of expanding social and individual consciousness. The eighties will undoubtedly see the emergence of new and powerful strategies for the development of human potential unknown in the past. The National Science Foundation recently issued a report of the President's Science Advisor prepared under contract with the Stanford Research Institute, titled "An Assessment of Future National and International Problem Areas." In it, one of six problems listed as not receiving adequate attention relative to their importance to society was "Potential Use and Misuse of Consciousness Technologies" (1977).

Whether these technologies are used to promote physical and mental health, expanded education, rehabilitation or personal enrich-

ment, there exist enormous possibilities for development of the personality. Suggestology and Suggestopedia offer a scientific basis for such strategies which, under progressive, humanistic guidance, can lead humanity toward the advancement of undreamed of potentials.

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Nouveau regard sur la Suggestologie et la Suggestopédie

Dans cet article il s'agit d'une récapitulation de la théorie et de la pratique de la Suggestopédie du Dr Georgui Lozanov. On examine en détail l'emploi de la Suggestopédie dans l'apprentissage des langues étrangères de même que les résultats obtenus par cette méthode d'enseignement.

Noch einmal Suggestologie und Suggestopädie

Dieser Artikel handelt sich um die Grundprinzipien und Ausübung der Suggestopädie von Dr. Georgi Lozanov. Eine ausführliche Erklärung und die Ergebnisse der Verwendung von Suggestopädie im Fremdsprachenunterricht sind eingeschlossen.

Sugestopedia y sugestodolagía revisada

Este artículo trata de los principios y práctica de la sugestodologia del Dr. Georgi Lozanov. También presenta una relación detallada de como la sugestopedia es usada en el aprendizaje de lenguas extranjeras así como los resultados de ésta.

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The Effects of Active Dramatic Presentation, Passive Review with Music, Practice Sentence Making, Word List Difficulty and Sex of Subject on Learning Rare English Words

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Abstract

The present research investigated the effects of Active dramatic vs. calm even presentation, passive review with Music vs. passive review without music, and silent solitary Practice of making sentences vs. practice aloud in pairs on the acquisition and retention of rare English words. These variables were felt to be crucial in optimizing learning through Suggestive-Accelerative Learning and Teaching (SALT) or suggestopedic techniques of instruction. The additional variables of Sex of subject, Teacher/experimenter, and Difficulty of word list were also experimentally manipulated in a full factorial analysis of variance design. A preliminary measure of ability to learn unknown vocabulary words was obtained on each subject, prior to the experimental procedures proper, and used to adjust for individual differences in learning ability. Subjects were 32 male and 32 female subjects recruited from introductory psychology courses at a midwestern university. Difficulty of list affected significantly both acquisition and retention. For retention, a significant Practice-in-pairs effect was obtained, as was a significant Music review by Active presentation interaction. This latter finding was obscured by the next higher order interaction with Teacher/experimenter. The SALT educational philosophy is discussed and suggestions for future research are presented.

The purpose of this study was to elaborate on the effects of several previously investigated variables on the learning and retention of rare English words. These variables were felt to be key variables in Suggestopedia or SALT, Suggestive-Accelerative Learning and Teaching, as it is called in this country.

The starting point for this research was the book *Suggestology* by Lozanov (1971, 1978) in which he detailed the results of research demonstrating that it is possible, by using Suggestopedia, to accelerate learning in many subjects, with some students increasing to a rate three or even five times faster than control students receiving more traditional instruction. The primary concerns of Suggestology are the effects of suggestion of one type or another on human performance, and on learning performance in particular. It is Lozanov's thesis that numerous powerful, unspoken suggestions exist in the classroom and in society which define how much learning is appropriate or "possible" and that these artificial limits are far below the level of performance which such

a "desuggested" individual can obtain. The techniques of Suggestopedia are the result of studies which explore the effects of removing these performance limiting suggestions in students and replacing them with suggestions which tell the students that they: 1) can learn large amounts of material easily; 2) will enjoy the experience; and 3) will not feel fatigue as a result of their studies.

Considerable support has been generated in favor of the suggestopedic method , both in this country and abroad, by the use of these techniques in field experiments (Gritton and Bordon, 1976; Peterson, 1977). Lozanov (1975b) presented the results of an experimental comparison with Suggestopedia utilized in first and second grade Bulgarian classrooms vs. other comparable classrooms as controls. In both rural and urban experimental schools, the usual reading and arithmetic materials were taught approximately three times faster than in the control classrooms. The entire year's work for the control classrooms was taught in the experimental classrooms in the first three and one-half months of the school year. The experimental students were also taught a "year's worth" of both Russian and English with Suggestopedia. This filled in the extra time, rather than sending them home. Smirnova (1975), a Russian researcher, has utilized Suggestopedia to teach English, French, and German as foreign languages to Soviet citizens. Her research shows that, by using Suggestopedia, it was possible for the experimental groups to learn approximately two to three times the number of vocabulary words learned in the same period by the control groups, and to retain 90% of the vocabulary after the instruction period had ended.

There is a considerable body of research which indicates that suggestion can be used to influence the amount of learning behavior exhibited by subjects. Barber (1969) reports that, by the use of appropriate suggestions, highly motivated non-hypnotized subjects can exhibit many phenomena which are generally assumed to be the product of hypnotic suggestion. One example is hypermnesia, an unusually large memory. Bordon and Schuster (1976) reported that, by using a variety of suggestions, students could be led to expect that learning would be easy. This manipulation significantly improved the learning of Spanish vocabulary words. Lozanov (1971) detailed how this variable works and also reported several experiments in which this variable had a significant effect. Barber and DeMour (1972) give a comprehensive list of variables known to influence subjects' expectancies about learning. However, since the effects of suggestion on expectancy can be quite variable, as reported by Rosenhan and London (1963), we felt that we did not want to investigate the effects of this variable in this study, and so it was held constant in a manner to be discussed later.

The suggestopedic method of presenting material to students can be divided into three distinct, successive stages. The material to be learned in any given lesson is first presented to the students dynamically and dramatically by the teacher. Then the material is reviewed with the

students, who are in a passive state of mind, to the accompaniment of Baroque music. Finally, the students spend considerable time practicing the material to be learned with each other; for example, in a foreign language class, the students may be requested to make sentences, with a partner, using the foreign vocabulary words from the lesson.

During the first two stages of suggestopedic instruction, subjects are instructed to form mental images to link the new words or ideas with their meanings. Many studies have shown that instructions to form images in learning new vocabulary words can enhance learning. Nappe and Wollen (1973) have reported favorably on the effects of instructions to form common or bizarre mental images on learning. T'Hoen (1978) reported that highly hypnotizable subjects learned words for which images were easily formed better than did less hypnotizable subjects. It was also reported that imageability interacted with word concreteness; the more imagery used, the better was the learning obtained and the more concrete words were learned better by subjects than were the less concrete words. Schuster (1976) reported that associative mental activity to make images during list presentation helped in learning rare English words, but this also interacted with subject suggestability. Finally, to test the effect of discontinuing image making by subjects who are practiced and experienced in it, subjects were asked not to make images to learn words by Schuster and Wardell (1978). This experimental manipulation resulted in a decrease in acquisition scores for words learned without images by subjects who had ceased image making. In the present study, image making was held constant by being requested of subjects in all experimental cells.

For a more complete coverage of the theory and techniques of Suggestopedia, the reader is directed to Lozanov's discussion (1975a), his 1978 book, and recent issues of *The Journal of Suggestive-Accelerative Learning and Teaching* , and the Bulgarian journal, *Suggestology and Suggestopaedia* , available in English.

Method

I. Experimental variables . On the basis of this previous research, we felt that the variables listed in Table 1 should be manipulated and investigated to ascertain whether or not they significantly affect acquisition and retention without the other suggestive-desuggestive techniques prescribed in Suggestopedia being introduced or manipulated. A full factorial analysis of variance (ANOVA) experimental design was employed.

The first independent between-subjects variable was the presence or absence of the active (A) dramatic presentation technique during the initial three-minute presentation of the material. The list of rare English words and their common definitions were read by the experimenter in a dramatic, varying, and dynamic fashion to half of the subjects, and

Table 1. Experimental Variables

Independent Variables	**Levels**
Between Subjects:	
1. Active, Dramatic presentation (A): 1-absent, 2-present	2
2. Music review (M): 1-without music, 2-with music	2
3. Practice sentence making (P): 1-alone, 2-in pairs	2
4. Experimenter-teacher (T): 1-T.M.M, 2-D.H.S.	
5. Sex of subject (X): 1-male, 2-female	2
—Replication (R): Subject #1 or #2 in above 32 cells.	2
Within Subjects:	
6. Difficulty of list: B-easy, C-hard	2
Covariates	
1. Free recall immediate acquisition score on preliminary word list (A1)	0-25
2. Matching format retention score on preliminary word list one week later (A2)	0-25
Dependent Variables	
1. Free recall acquisition score on experimental word list (B1-easy or C1-hard):	0-25
2. Matching format retention score one week later on experimental word list (B2-easy or C2-hard):	0-25
Check Variables (used for both lists)	
1. Learning expectation:	1 (hard & unpleasant) - 9 (easy & pleasant)
2. Imagery used during presentation.	1 (none) - 9 (always)
3. Perceived presentation style during presentation:	1 (calm) - 9 (dramatic)
4. Perceived mood after music review:	1 (calm, relaxed) - 9 (excited, concerned)
5. Number of sentences made during practice.	0-99

calmly and evenly to the remainder during this phase of the experimental treatment. The subjects in both of the presentation conditions were requested to make images while the list was being read and had been given prior practice in this.

The second independent between-subjects variable was whether the words were reviewed without music or with Baroque music in the background. During the second three-minute learning period on a given list, the experimenter read the word list through once again, this time quietly and evenly, the difference between the two levels being the presence or absence of music. Half of the subjects had music during this review; half did not.

There has been little previous research investigating the effect of music on learning. Bordon and Schuster (1976) investigated the effects of music paced with the presentation of words, as well as the effects of suggestion and synchronized breathing, on the learning of Spanish vocabulary words. In addition to reporting significant main effects of music, suggestion, and breathing, they reported a significant cumulative interaction for the effects of all three variables as the best treatment in remembering the vocabulary words. According to the suggestopedic theory of instruction, the music serves the purpose of "opening up", or making more accessible to learning, the neural networks of the brain which will eventually assimilate the material.

The third independent between-subjects variable was how the experimental subjects practiced making sentences with the new words for the final three minutes of the material presentation. In the non-SALT condition, half of the subjects were requested to make sentences using the rare English words silently to themselves, whereas in the SALT condition, the rest of the subjects were instructed to alternate making sentences aloud with another subject. The suggestopedic rationale for paired practice is twofold: first, the material is practiced under conditions which vary in format from previous exposure to the material; second, the use of material in communicating with another person produces arousal above and beyond the mere repetition or practice of it, and this contributes to the eventual mastery of the material to be learned (Lozanov, 1978). In several instances, an uneven number of subjects were run in the same group; in this case, the odd subject made sentences with the experimenter.

The fourth independent between-subjects variable was the experimenter or "teacher". The first experimenter was experienced in this type of research, having had several years of practice using SALT techniques in research and teaching. The second experimenter was initially inexperienced in SALT techniques, having had no prior experience as a teacher utilizing the SALT techniques. He was also largely unfamiliar with much of the results from previous SALT research at the time and, consequently, skeptical about the experimental outcomes. These differences may have elicited differential unvocalized demand characteristics and will be discussed later. Neither experimenter was blind to the experimental hypotheses.

The fifth independent between-subjects variable was the sex of the subject. Research typically shows that females are superior to males in using words and learning their meanings.

These five variables, with two levels each, combined to form 32 cells in a complete factorial experimental design. Two subjects per cell provided a replication factor in each of the 32 cells, for a total of 64 experimental subjects.

The only within-subject independent variable was that of list difficulty. Previously, the first experimenter had selected 400 words from Webster's *Unabridged Dictionary* which are virtually non-existent in popular vocabulary. For use as an experimental variable, difficulty was determined from scrutinizing acquisition data in previous research. These 400 words were rank ordered within each initial letter group (b, c, d, f, g, k, l, p, r, s, t, w). The two most difficult words to acquire were selected from each letter grouping, with the exception of the "w" words, from which only one word was selected, and these became the difficult word list (mean prior acquisition rate= .46, s.d.= .12). A similiar process was done to obtain the easy word list (mean prior acquisition rate= .86, s.d.= .09). The covariate list used the words of median difficulty, and was also assembled by this method (mean prior acquisition rate= .58, s.d.= .10).

II. Subjects . Subjects, 32 male and 32 female, were recruited from introductory and lower level psychology courses at a large midwestern university. Each subject received one and one-half hours of experimental credit for his participation.

III. Procedure . Subjects were scheduled to appear in groups of six to eight at a time for one of the 16 experimental groups, with at least two males and two females being run through each procedure by each experimenter. Typically, both experimenters ran subjects for their half of the experimental data collection simultaneously. Subjects were met in an area near the experimental rooms, randomly assigned to one of the two experimental rooms, and given subject identification numbers which defined their experimenter, procedure conditions, sex and replication number (for example S111, male-2). Only these subject code numbers were put on the experimental data collection sheets.

One experimenter went through one sequence of all combinations of experimental treatment procedures. The other experimenter went through the same sequence simultaneously in reverse order to control for practice effects and fatigue in manipulating the experimental conditions. Thus, sequence effects were linearly counterbalanced over the two experimenters' data.

All subjects were given the covariate list (A) to be studied for nine minutes, as a measure of the individual's ability to learn unfamiliar vocabulary words. The acquisition score was the number of rare words correctly defined in a free recall format immediately after the nine-minute study period.

The rating sheet containing the check variables was distributed at this point. Subjects were requested to fill out a measure of learning expectation. As discussed above, this is an important suggestopedic variable which we were not manipulating. This check variable allowed

us to determine whether or not this variable was, in fact, random across subjects and conditions.

Before the easy list (B) was read to the subjects, the instructions were read to them. All subjects were requested to make images to associate the rare English words and their definitions, and were given examples in practice of how to make these images or associations. The B list was now presented in three minutes, as described above, for the Active presentation variable. With practice, both experimenters were able to shoehorn the reading of the experimental lists, during both the presentation and the review, into exactly three minutes.

As a check on the use of imagery, subjects were requested to fill out a second check rating, indicating how much imagery they had used during the first three-minute presentation. At this time, they were also requested to fill out a third rating on how they perceived the list presentation, as a check on whether our manipulation at this stage had been perceived as intended by the subjects. The experimenter then reviewed the words with or without music, as discussed above for the Music variable. Subjects were requested to recall any images that were formed during the initial presentation. After these three minutes, the subjects were requested to mark a fourth check rating on their rating sheets to check whether the music review had affected their subjective mood.

The last three minutes allotted for learning the list were spent in having the subjects make sentences, using the rare vocabulary words as discussed above for the Practice variable. As a possible control variable, subjects were asked, at the end of this final learning period, to indicate how many sentences they had made during the practice period on their rating sheets. Rating sheets were collected at this point. The B acquisition quiz was also given at this time. A free recall format was used wherein subjects were required to supply the definitions to an alphabetized listing of the rare English words which they had just learned. All quizzes were untimed, but typically took five to ten minutes. An identical procedure, from the distribution of the rating list through the three learning periods to the collection of the acquisition quiz, was then repeated for the hard list (C) of rare English words.

The learning sessions took approximately 60 to 70 minutes, including all three lists and acquisition quizzes. Subjects were then debriefed and reminded that they would have to return for the follow-up (retention) quizzes in one week.

One week later, the retention quizzes were administered in the same experimental rooms as before. Retention quizzes were given in the form of an untimed matching test. Subjects were requested to pick the correct definition for each word from a list of thirty possible definitions, five bogus definitions having been introduced to reduce increased correct guessing for the highest scoring subjects. Subjects were requested to fill in definitions for all words. This was done to overcome possible differences in test-taking strategies and thereby distribute chance guessing variance equally across all subjects and conditions.

A matching format was chosen for retention scores because previous research (Schuster and Martin, 1977) showed that subjects typically score only about 5% correct on free recall retention tests with this material, and that these scores are highly skewed, with many scores being zero. The use of a matching format, rather than a free recall format, was expected to improve retention scores and thereby normalize the distribution.

Finally, subjects were again debriefed.

Preliminary Analyses

All test data were scored by one experimenter and checked by the second experimenter for accuracy. All of the test scores, separate ratings and the coded levels of the independent variables were then key-punched and verified. Since, occasionally, there were more than two subjects per cell for whom we had data, we eliminated extra subjects by the following criteria:

1. Subjects who had known any of the rare words prior to the experiment were eliminated (n= 4). Only two subjects who didn't meet this criterion, knowing one word each and with scores reduced by unity, were included in the analyses.

2. Subjects who indicated on the style rating that they didn't perceive the presentation as intended were eliminated, if possible (n= 7).

3. Subjects who had either misunderstood the covariate instructions or who had not been motivated to learn the covariate list, as indicated by abnormally low scores on quiz A1 in relationship to their performance on B1 and C1, were eliminated (n= 1).

4. Subjects who had not filled in all answers on the retention quizzes, or had not shown up for these measures, were eliminated (n= 5).

5. In six cases, none of the above criteria applied. In these cases, subjects were eliminated randomly to trim the cell size to two.

In order to determine whether there were sampling differences in the random assignment of subjects to the 32 experimental treatment cells, we did preliminary ANOVAs on the covariate list (A) acquisition and retention scores. The analysis of variance on the covariate acquisition (A1) quiz scores showed no significant effects ($p < .05$) for any of the independent variables. However, the 32 cell means ranged from 10.5 to 24.0, indicating considerable variance of ability to learn words. This wide spread of ability scores led us to believe that we would gain in precision if the data were analyzed by means of analyses of covariance, using the A list score as the covariate.

We did a similar analysis of variance, using the covariate retention quiz scores (A2). There was, in addition to the significant main effects of P and X ($p < .05$), a significant interaction ($p < .05$) for the triple interaction of active presentation, music review, and practice variables. This indicated to us that either subjects had not been assigned randomly

across cells with respect to their ability to retain vocabulary words or, since the A2 quiz had been collected after the experimental procedures had been performed, the criterion measure might have been affected by the differences in the treatment procedures that the subjects were exposed to. It was decided to use the A list acquisition scores as the covariate in both the acquisition and the retention analyses of covariance. Correlations between the covariate and the later measures of word acquisition and retention were all about .60 ($p < .0001$).

Similar preliminary analyses, using the ten check variables from the rating sheets, were done; there were several results worth noting.

The presentational style check variables were affected significantly by the Active presentation vs. calm presentation manipulation ($p < .001$) with means as intended on the easy list being 7.50 vs. 2.75 on the nine point scale, and means on the hard list being 7.25 vs. 2.71. There was a sex by presentation interaction for the easy list only ($p < .01$) in which females tended to be more extreme in their evaluations (8.06 for active, 1.94 for calm) than did the male subjects (6.94 and 3.50, respectively).

The music review vs. no music review manipulation did not affect the feeling check variable for either list. This may have been due to the wording of the "excited, concerned" anchor points' being confusing to subjects, or to a weak effect of the music, such as insufficient time (three minutes).

A sex difference was obtained on expectation checks for both lists ($p < .05$). Females thought that learning would be easier than males on both lists. This may be due to the fact that females performed better on most lists and the higher scoring subjects tended to expect learning to be easier ($r = .31$ for the easy list, $r = .24$ for the hard list, $p < .01$).

A significant Teacher/experimenter effect was obtained on the expectation rating for the easy list. Subjects for one experimenter expected the learning to be harder than did the other subjects. This may have been due to unvocalized demand characteristics or to differences in age and personal characteristics between the two experimenters. This effect was not obtained for the expectation ratings on the hard list and thus may have been chance.

For the easy list there was a significant Music review effect ($p < .05$) upon the sentence count. Subjects who had the review with music made more sentences than did those subjects who reviewed without music (25.66 vs. 20.09). This effect disappeared on the sentence count for the hard list. The effect of type of practice was also nearly significant ($p < .06$); subjects made more sentences when practicing alone (25.25) than did subjects working in pairs (20.50). This effect did not occur in the hard list, and is felt to be due to initial subject inexperience or discomfort with the oral sentence-making-in-pairs task. There was a significant Music review and sentence Practice interaction on both lists for the sentence counts. The combination of review with music and solitary practice produced the greatest number of sentences for both lists, with the other three conditions being about equal in each list.

There was a significant sex effect for the use of imagery on both lists ($p < .05$ for the easy list, $p < .055$ on the hard list). Females indicated that they used imagery more often than the male subjects (5.94 vs. 5.09 on the easy list, 5.16 vs. 4.28 on the hard list). This can be explained in a fashion similiar to the sex difference obtained on expectation; subjects who scored higher used more imagery ($r = .33$ and .14, respectively) and females generally scored higher on the quizzes.

Being reasonably certain that our randomization was effective and that there were no insurmountable anomalies in our data, we performed analyses of covariance using the A acquisition results as our covariate.

Results

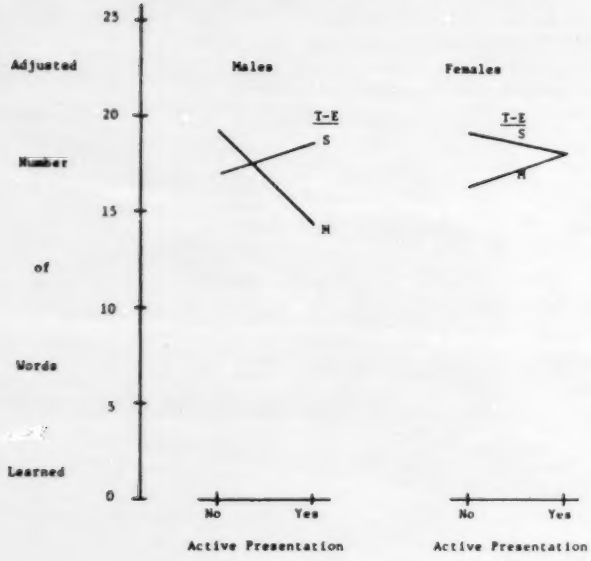
First to be evaluated was the number of obtained significant results vs. chance. By chance, out of 64 effects, one would expect to find three results significant at the 5% level and one at the 1% level. In the analysis of variance of acquisition data, there were only four results significant at the 5% level and two at the 1% level. In the analysis of the retention data, there were thirteen and four, respectively. Consequently, most of the significant results discussed for acquisition should be viewed with suspicion, especially the higher order interactions which we based on only a few subjects' data per average. However, most of the significant retention results can be accepted as genuine, with the warning repeated about higher order interactions. Of course, one would have to repeat this study to tell which were chance results and which genuine through continued significance.

Significant results of the analysis of covariance for the effects of the independent variables upon immediate acquisition scores are presented first. In both this analysis, and in the analysis in which the retention score is used as the dependent variable, all interactions were first graphed and examined. Comparisons were performed on all interactions by means of the Newman-Keuls method, or by means of Duncan's new multiple range test where the Newman-Keuls method yielded no differences.

In the acquisition analysis, only the main effect of Difficulty of list was significant ($F = 114.63$, $df = 1\&2$, $p < .01$; omega-squared = .18). The average for all subjects on the harder list was 15.09, while the average was 20.25 on the easier list. This difference reflects the care with which the previous empirical analysis had been done to select words differentially for the two lists.

The effects of Sex of subject, Active presentation and Teacher/experimenter interacted significantly on acquisition scores ($F = 6.46$; $df = 1,31$; $p < .05$; omega-squared = .03). This interaction is graphed in Figure 1. For one experimenter (M), the active presentation for males was significantly lower than the other seven data points graphed. This effect is felt to be of minor importance, although it is contrary to a suggestopedic expectation.

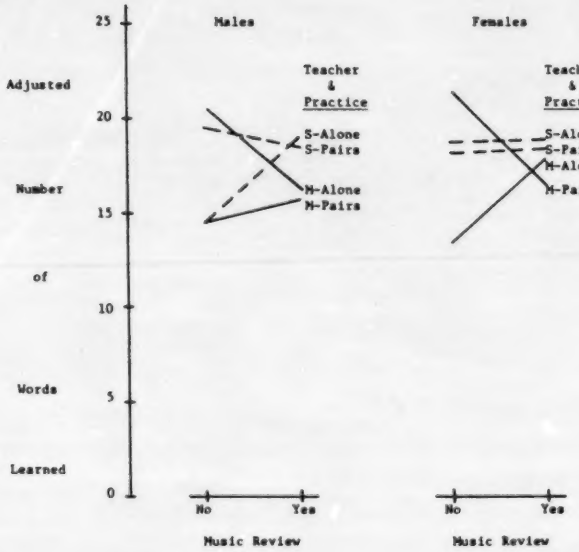
Fig. 1. The effects of sex of subject, active presentation and teacher-experimenter (T-E) on learning rare words



The independent variables of Sex of Subject, Music review, Practice sentence making, and Teacher/experimenter interacted significantly ($F = 6.21$; $df = 1,31$; $p < .05$; omega-squared = .03). This result is depicted in Figure 2.

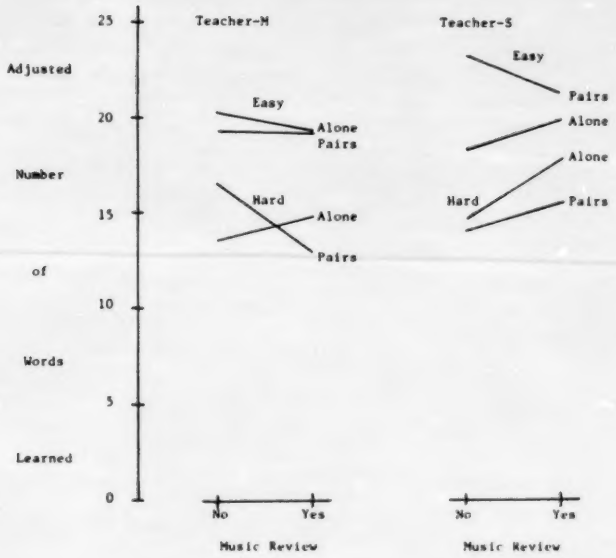
The two experimenters' data agreed reasonably well with each other when music was used for both sexes. When music was not used, the results for males were somewhat discrepant across practice of sentence making and experimenters, whereas they were considerably different from one experimenter to the next for females. Practically, this effect is felt to be minor, although musical review and paired practice were hypothesized as generally superior.

Fig. 2. The effects of sex of subject, music review, practice with sentences and teacher-experimenter (M-S) on learning rare words



The effects of Practice sentence making, Teacher/experimenter, and Difficulty of list interacted significantly on acquisition scores ($F = 9.30$; $df = 1,32$; $p < .01$; omega-squared = .01). This is subsumed under the next higher order, nearly significant interaction, of music review, practice sentence making, teacher/experimenter, and difficulty of list ($F = 4.05$; $df = 1,32$; $p = .055$). This interaction is presented in Figure 3. What appears to have occurred is that for one experimenter (M), music helped subjects learn the harder list when subjects subsequently practiced making sentences alone, but hindered subjects on the harder list who subsequently made sentences in pairs. For the other experimenter (S), music review was generally a facilitative manipulation across treatment groups. When one examines the Practice, Teacher/experimenter, Difficulty interaction, one sees that all the easier list group means were higher than all of the harder list groups and that the practice in pairs group for one experimenter (S) was significantly higher than the remaining three easy list groups. Some of the differential results here thus may have been due to different experimenter demands unconsciously; chance also may have produced this result.

Fig. 3. The effects of music review, practice with sentences, teacher-experimenter (M-S) and difficulty of list on learning rare words



The results of the analysis of covariance, using retention scores measured one week later, are presented next. The main effects of Difficulty of list ($F = 306.68$; $df = 1,32$; $p < .01$; omega-squared = .42) and sentence Practice ($F = 4.33$; $df = 1,31$; $p < .05$; omega-squared = .01) were significant. The means for list difficulty were 9.17 for the hard list and 18.05 for the easy list on the matching retention quizzes. The means for the practice variable were 11.85 for the practice-alone condition and 15.37 for the practice-in-pairs condition.

The variables of Active presentation and Music review interacted significantly ($F = 6.98$; $df = 1,31$; $p < .05$; omega-squared = .02) in the retention analysis. The means for the various combinations of these two variables were: 10.52 for dramatic presentation with music review; 13.09 for calm presentation without music review; 14.63 for dramatic presentation without music review; and 16.21 for calm presentation with music review. Theoretically, according to Suggestopedia, best learning should have occurred when both a dramatic presentation and review with music were used.

This interaction is best understood by an examination of the next higher order interaction, that of Music review, Practice of sentences, and Teacher/experimenter. What the interaction represents is an experimenter difference in the effect of the calm vs. dramatic presentation when the material is subsequently reviewed without music. For one experimenter (M), the calm presentation with music and the dramatic presentation without music both facilitated retention, while having both or neither suggestopedic conditions present impeded retention. For this experimenter's data, the review with music seems to point out that music distracted the subjects after the dramatic presentation, but enhanced retention after a calm presentation. Since the musicless review condition was experientially identical to the calm presentation, it seems reasonable that music free review may have been detrimental to subject performance in its repetitiveness when used after the calm presentation, but may not have had that drawback following a dramatic presentation. In a similar vein of reasoning, the review with music may have been distracting to subjects following an active presentation, but functioned as it is presumed to following a calm presentation. For the other experimenter, the music manipulation had no effect, with the calm presentations being more effective than the active in both cases. Finally, this complicated interaction may be due to subtle demand characteristics of the two experimenters. Let the person beware who attempts to duplicate this study.

The interaction of Sex of subject, Active presentation and Practice of sentences on retention of the words was significant ($F = 8.75$; $df = 1,31$; $p < .05$; omega-squared = .02). Essentially, the males receiving a calm presentation and then practicing in pairs demonstrated superior retention to all the other groups in the interaction. For the females receiving the active presentation, practice in pairs was superior to solitary practice in sentence making. All in all, this interaction underscored the facilitative effect of sentence making practice in pairs over solitary practice.

The interaction of Sex of subject, Music review, and Practice of sentence making had a significant effect on the retention scores ($F = 4.84$; $df = 1,31$; $p < .05$; omega-squared = .02). The review of the words with music facilitated retention for males when practicing sentences in pairs, whereas the reverse was true for females. For solitary sentence making practicing, the music review variable appears to have had little effect for either sex.

The triple interaction of Sex of subject, Practice of sentences, and Teacher/experimenter on retention was significant ($F = 6.41$; $df = 1,31$; $p < .05$; omega-squared = .02). The gist of this interaction seems to be another qualification to the superiority of practice in pairs over solitary practice; for one experimenter (M), there was no difference in the male subjects between practicing alone and practicing sentence making in pairs.

The quadruple interaction of Active presentation, Music review, Practice of sentences, and Difficulty of list on retention was significant ($F = 4.66$; $df = 1,32$; $p < .05$; omega-squared = .01). Sentence making in

pairs was always superior to sentence making practice alone. Subjects always retained more words from the easier list then from the harder list. Again, the effect found in the Active presentation by Music review interaction was present. The cause of this interaction appeared to be in the slopes of the lines in the interaction of Active presentation by Music review, and was hard to interpret meaningfully. Chance was also a possible cause here.

Three other triple interactions achieved significance ($p < .05$) in the ANCOVA for retention and did so by virtue of having one mean that was either abnormally higher or lower than expected. These were felt to be chance findings and contribute nothing to our understanding of the variables under investigation. The quintuple interaction of Sex of subject, Active presentation, Music review, Teacher/experimenter and Difficulty of list was also significant ($F = 4.93$; $df = 1,32$; $p < .05$; omega-squared = .01). Due to the low number of subjects per cell in the quintuple interaction, it is felt that the effect is unreliable and probably due to chance.

Because of its theoretical interest, the interaction of the effects of active presentation, music review, and practice of sentences on learning rare words is included. This interaction was nearly significant ($p < .10$) in the analysis of variance for acquisition, but washed out in the ANCOVA. The suggestopedic model predicts that the best results should have been obtained with all three conditions of the suggestopedic treatments, i.e., dramatic presentation, review with music, and practice in pairs. All three variables, when present, should have accumulated to produce the best learning. This hypothesis was not supported by the data in this interaction, nor was there such a cumulative trend.

Discussion

Suggestopedic theory predicts that the subjects' receiving dramatic presentation, review with music, and practice of sentences orally in pairs should exhibit the greatest learning in our study. Of these three variables, only the practice of sentences variable was successful in constantly producing superior learning, as evidenced by superior retention scores for such subjects. Thus, we must conclude that the suggestopedic method has received only limited support in this study.

The failure of the musical review to facilitate learning is surprising in view of its effects reported by Lozanov (1978) and Bordon and Schuster (1976). Previously in this paper, we reported on the lack of a significant effect of music on our "calm" vs. "excited" check variable recorded just after the the three-minute period of music review. Perhaps this explains the lack of expected results here.

The relationship between initial presentation style and music review was obscured by the significant experimenter differences in the combination of these two variables in retention of material. From an overview of the significant interaction in which it appeared, it seems

that the dramatic presentation was not as effective as the calm presentation as an aid in learning. The adjusted retention means were 14.65 vs. 12.57 in favor of the calm presentation. However, due to the wide variances and the presence of all the other variables under manipulation, this was not a significant difference in our data. Further research is needed to evaluate the differences in learning produced by this variable in combination with manipulating subject expectancies and to rule out the few chance results in this study.

An attempt to clarify the Active presentation, Music review interaction by means of a controlled study would ideally involve the treating of Teacher/experimenter as a random variable. This would involve no small amount of practical difficulties, such as the training of a fairly large number of teachers for the experiment. However, this is a question of considerable theoretical importance in the suggestopedic area. Lozanov himself (1978) has changed the first or active presentation of material; perhaps he has had experience similar to ours reported here.

The major drawback of the present study is the small subject size (n= 2) per cell. Although for the main effects we have adequate groups sizes for the analyses performed, the interactions become increasingly unstable and prone to spurious significance in the three, four and five way cases. Power was acceptable for the main effects and two variable interactions, but became unacceptably low for the higher order interactions.

As was noted previously, the important suggestopedic variable of suggestion-desuggestion was not explored in the present study. Our main reason for ignoring this variable was that it takes some amount of time to produce a change of the variable within subjects. A study involving effective manipulation of this variable would involve several times as much subject participation which would necessitate looking at only a very few additional variables in a given study. However, this sort of manipulation in a study is necessary to determine causality in the effect upon learning behavior by changing the implied suggestions present within the subject. It is well known that favorability of attitudes toward learning situations (i.e., school) is positively correlated with learning performance as evidenced by grades (Millard, 1978), but at present we are unsure what causes what. Suggestopedic theory predicts this effect by suggesting that the "attitudes" cause the performance. A reinforcement-style theory would explain the effect in the reverse fashion.

Our present results must be evaluated in light of the absence of manipulation or control of the suggestive-desuggestive expectation. First, since it is presumed that this construct is distributed randomly in some fashion in the population, the possibility exists that the variables looked at in the present study were ineffective to some extent without the manipulations prescribed for the suggestopedic method. Secondly, since suggestive-desuggestive elements are present in various amounts in the sample, noise may have been produced if suggestion interacts with any of the manipulated variables, and this would have reduced the power of our study. One suggestion for future research which would alleviate this

problem, at least in part, would be to block subjects on the implicit suggested performance level under which they operate.

In addition to using a predicted quantitative increase in learning as a result of suggestopedic instruction, there are several effects which might serve as additional dependent measures for future researchers, and therefore merit discussion at this point.

First of all, it has been reported (Lozanov, 1978) that suggestopedic instruction eliminates or reduces fatigue in students, which usually accompanies concerted mental activity in a learning situation. In the present study, list order was held constant and confounded with list difficulty. An attempt to ascertain whether any list order effect, e.g., fatigue, could be found was made, but was impossible due to a regression toward the mean in both the easy and difficult lists. Due to the nature in which the lists were constructed, the originally extreme values of the words constituting the two lists tended to become less extreme and rendered a comparison with the standardization data futile. However, it should be pointed out that the Difficulty of list variable was still highly significant and the mean differences were 20.25 vs. 15.09 on acquisition, and 18.05 vs. 9.17 on retention, for the easy and the hard list, respectively. Future researchers might wish to dwell on a freedom from fatigue effect, using matched lists and a repeated measure design.

In a similar vein, Lozanov and Balevski (1975) claimed that suggestopedic instruction results in improving mental health for individuals given instruction via Suggestopedia. To us, this seems a valuable by-product of the method and merits additional study, probably in a field setting, on this effect.

In summary, we feel our results support the following conclusions:

1. Having subjects practice making meaningful sentences to communicate in social dyads, a la Suggestopedia, is an effective way to learn vocabulary.

2. The dramatic presentation of vocabulary to be learned, or its quiet review with music a la Suggestopedia, were not effective aids in learning vocabulary. Perhaps this result arose from not including interactions with imagery or expectancy in the design , both of which are prescribed suggestopedic variables, or from the music's not having a strong enough effect on mood or mental state.

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Les effets sur l'apprentissage des mots anglais rarement employés des variables suivantes: 1) une présentation active, dramatique; 2) une deuxième présentation passive, avec intégration de la musique; 3) la pratique de la formation des phrases; 4) la difficulté des mots sur la liste; 5) le sexe du sujet

Dans cette enquête qui a été menée sur l'apprentissage et la mémorisation des mots anglais rarement employés, on a examiné les effets d'une présentation active et dramatique comparée à une présentation égale et neutre; d'une deuxième présentation passive, avec intégration de la musique, comparée à une présentation sans musique; de la formation des phrases individuelle et intérieure comparée à la pratique orale des mots par paires. En ce qui concerne l'apprentissage suggestopédique (de forme SALT), ces variables paraissaient essentielles à l'obtention des résultats optimums. Afin de compenser pour les difficultés dues à ces variables, on a tenu compte des facteurs professeur/expérimentateur, sexe du sujet et difficulté des mots. De façon à pouvoir ajuster les résultats et évaluer les différences individuelles d'apprentissage, on a préalablement mesuré la capacité

de chaque sujet d'apprendre de nouveaux mots de vocabulaire. Les sujets comprenaient 32 mâles et 32 femelles recrutés parmi les étudiants en première année de psychologie dans une université du Mid-West des Etats-Unis. Le facteur difficulté des mots a eu une influence significative à la fois sur l'apprentissage et la mémorisation. Pour la mémorisation, on a trouvé que la pratique par paires avait aussi un rôle important, de même que la présentation avec musique et l'interaction avec la présentation active. Le facteur présentation interactive est difficile à interpréter à cause du facteur professeur/expérimentateur. On conclut par une brève présentation des principes pédagogiques de SALT et on fait quelques suggestions pour des recherches futures.

Die Wirkung von aktiver, dramatischer Präsentation, passiver Wiederholung mit Musik, Übung mit Satzbildung, Schwierigkeit der Wortliste und Geschlecht der Versuchspersonen auf das Erlernen von seltenen englischen Wörtern

Die vorliegende Untersuchung befaßt sich mit der Wirkung von einer aktiven, dramatischen Präsentation gegenüber einer gelassenen, ruhigen Präsentation, passiver Wiederholung mit Musik gegenüber einer ohne Musik, und lautlose, alleinige Übung mit Satzbildung gegenüber einer laut ausgesprochenen Übung in Paarkombinationen auf die Erlernung und Konservation von seltenen englischen Wörtern. Es wurde angenommen, daß diese Variablen entscheidend sind, um das Lernen durch Suggestive Accelerative Learning and Teaching oder suggestopädische Unterrichtsmethoden optimal zu gestalten. Die weiteren Variablen des Geschlechts der Versuchsperson, des Lehrers/Experimentators und der Schwierigkeit von der Wortliste wurden auch in einer vollen Faktorenanalyse des Varianzentwurfs versuchsweise gehandhabt. Vor dem Versuchsverfahren wurde die Lernfähigkeit für unbekannte Wörter von jeder Versuchsperson gemessen und dann gebraucht, um die einzelnen Unterschiede in dieser Lernfähigkeit auszugleichen. Die Versuchspersonen waren 32 Studenten und 32 Studentinnen aus Anfängerkursen in Psychologie an einer mittelwestlichen Universität. Die Schwierigkeit der Liste wirkte bedeutend auf Erlernen und Konservation. Für Konservation wurde eine bedeutsame Übung-in-Paarkombinationen Wirkung gewonnen wie auch eine Musikwiederholung durch Wechselwirkung während der aktiven Präsentation. Dieser letztere Befund wurde aber durch die nächst höhere Wechselwirkung mit Lehrer/Experimentator überschattet. Die SALT Ausbildungsgrundlage wird diskutiert, und Vorschläge für weitere Forschung werden vorgelegt.

Los efectos de una representación dramática activa, de un repaso pasivo con música, de una práctica en hacer oraciones, de una lista de palabras difíciles y el sexo del estudiante en el aprendizaje de palabras raras en el idioma inglés.

Este trabajo investiga los efectos de una presentación dramática active en oposición a una apacible, un repaso con música opuesto a otro sin ella, y una práctica solitaria y silente en hacer oraciones en oposición a otra en voz alta y en parejas, para el aprendizaje y retención de palabras raras del idioma inglés. Estas variables fueron consideradas como cruciales para el mejor aprendizaje en el sistema de "Enseñanza y aprendizaje acelerado por medio de la sugestión" (SALT) o por las técnicas de instrucción sugestivas. Las otras variables del sexo del estudiante, maestro-experimentator, y las dificultades de la lista de palabras fueron también manipuladas experimentalmente en el análisis total de factores de acuerdo con las posibilidades del diseño. Una medida preliminar en la capacidad de aprender palabras de un vocabulario desconocido fueron obtenidas en cada estudiante con anterioridad a los propios procedimientos del experimento, y usadas para modificar las diferencias individuales en la capacidad de aprendizaje. Los estudiantes eran 32 mujeres y 32 hombres reclutados de los cursos de psicología elemental en una universidad del medio-oeste en los Estados Unidos. Las dificultades de esta lista afectaron significativamente, al mismo tiempo, la

adquisición y la retención. En la retención fue obtenido un significativo efecto en la práctica en parejas, así como también en la interacción de una presentación activa y de un repaso con música. Este último hallazgo fue obscurecido por el siguiente nivel de interacción con el maestro-experimentador. La filosofía educacional de SALT fue discutida y también fueron presentadas sugerencias para futuras *investigaciones.*

J. of Suggestive-Accelerative Learning & Teaching, 1979, (4) 1

One Year of Suggestopedia in France

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Abstract

The author outlines various techniques of suggestopedic instruction, as used in different learning situations in France.

The first suggestopedic English course for adults took place in the Further Education Centre of the University of Paris III-Sorbonne on November 14, 1977. Since then, we have been able to organize eight courses; two at the Sorbonne, one at the Professional Training Centre for Journalists (CFPJ), and five for the French School of Suggestopedia (EFS).

The moment is right for Suggestopedia in France as the method can only arouse interest and even enthusiasm, given its effectiveness and the humanistic hypotheses it is founded on. At present, the most up-to-date teachers and general public are questioning the effectiveness of language laboratories and audio-visual methods. Compared to traditional methods used 15 years ago, these have, in fact, marked a great step forward in permitting the rapid acquisition of a certain passive knowledge of foreign languages. However, these methods are very disappointing when it comes to actively using this knowledge in a creative way, since they do not facilitate free expression in the foreign language in most cases, and they often even aggravate what is known as oral inhibition.

This oral inhibition, worse in English than in other languages, is a real handicap for hundreds of thousands of people, since social and professional advancement today require working knowledge of English.

At the Professional Training Centre for Journalists and the French School of Suggestopedia, the groups are comprised, for the most part, of executives and office workers sent and paid for by their companies.

At the Sorbonne, however, more than 80% of the groups are unemployed persons, anxious about their future, ill at ease in their present unstable situation. For them, being able to communicate effectively in English is the way out of their present situation. The very importance of English makes them even more tense in a learning situation that they have been conditioned to fear from childhood.

This is why the introduction of a method like Suggestopedia is so important. A case in point is a 44-year-old unemployed engineer in the first suggestopedic course who had spent years trying to master English, without success. Puzzled for the first few days, he observed everything without really participating, protested about the length and difficulty of

the dialogues, and then suddenly brightened up the second week, daring to enjoy himself more and more. By the end of the course, he spoke English with obvious pleasure.

Along with several others of the same group, this student informed the French Labour Exchange (ANPE), a State Organization which reorients unemployed workers, that the Sorbonne was offering an incredible course. In five weeks, he had realized his dream, he spoke English. Since then, Suggestopedia is getting a reputation as a method which is particularly effective in enabling students to overcome their inhibitions.

Most of the people who come to us do, of course, need to acquire a knowledge of the language, but their primary concern is getting over their reluctance to speak. This reputation that the suggestopedic method is getting, as a learning method permitting memorization of an unusually large amount of material, may pose problems in terms of its effectiveness.

Furthermore, the tests at our disposal are not really applicable since very few people in France are absolute beginners in English. There is a distinction between absolute beginners and "faux-debutants" in France, but many faux-debutants claim to be absolute beginners. To us, a faux-debutant is someone who has studied Enlgish for up to twelve years and yet is unable to go to England and order his proverbial cup of tea.

For the first four suggestopedic courses, we used the same test as in Sofia, slightly modified to take into consideration the linguistic particularities of French in relation to English. The average score obtained before the course was 50.43%. We felt that we wouldn't teach anything to these people who, despite this score, could not speak.

With the next three groups, we weighted the test to give greater importance to oral comprehension and expression, while simultaneously increasing the difficulty of the written part of the test. The average score obtained with the second test was 20.39% which, to us, was more encouraging.

Table 1

Linguistic Level of the First Seven Suggestopedic Groups for the Learning of English (in %)

1st Test	Group 1	Group 2	Group 3	Group 4	Average
Beginning of course	51.69	62.30	51.75	36.00	50.43
End of course	89.64	88.80	88.57	79.00	86.50
2nd Test	**Group 5**	**Group 6**	**Group 7**	**Average**	
Beginning of course	19.45	16.24	25.50	20.39	
End of course				58.96	

In our opinion, it is the progress made rather than the total percentage obtained in the tests that counts, especially with "faux-debutants". We thus calculated the difference between the average scores obtained before and after the course.

With the first test, the improvement of the four groups was 36.07% (86.5 less 50.43) and with the second test for the three following groups, it was 38.57% (58.96 less 20.39). The observed difference between the two tests is thus 2.5% and may well be attributable to better teaching through wider experience and improved course organization.

It is also possible that, despite our attempt to improve upon the first test, the measuring capacities of the two are fundamentally the same. In any event, it is quite likely that neither test is perfectly adapted to the measurement of the faux-debutants' suggestopedic linguistic progress. It seems extremely difficult to devise a test, taking into account not only the linguistic progress but also the students' personal satisfaction, their greater confidence in their abilities, and the positive stimulation of their entire personality.

We ran an experiment on our fourth group with Judith Bullerwell, an English teacher at the Ministry of Foreign Affairs and at the Paris Chamber of Commerce. In addition to the first version of the test, we recorded an interview which, although guided, allowed the free and creative expression of the students.

Although this experiment is limited in scale, it bears out our subjective impression that it is the faux-debutants who make the greatest progress in suggestopedic teaching. And this is very different from the results generally obtained in traditional teaching, which allow absolute beginners to progress much more quickly than the others.

We are particularly interested in the results of a course beginning this November 20, in the French School of Suggestopedia. It is comprised of nine absolute beginners out of twelve participants. We have spent several months putting this group together since it is extremely difficult, as mentioned above, to find at any given moment, an entire group never having been exposed to any English.

In addition to the tests discussed above, we have also come up with a first draft of a questionnaire, to be answered at the end of the course in order to get feedback. Only the last three groups have answered this questionnaire and we have 31 answers.

In response to the question asking how the participants generally felt at the end of the course in relation to the beginning, 41.93% answered that they felt better, 19.35% observed no change, 29% were tired and 9.67% gave no answer. In referring to the enrollment questionnaires, we were able to ascertain that all those who felt more tired at the end of the course had put in normal work days throughout the course. In some cases, the participants had had to work overtime in order to make up for time lost at work because of the course. It is noteworthy that 74.19% of the participants would like to do a second course at a higher level. As for the linguistic progress the participants felt they had made:

Table 2

Progress (in %)

Skill	Much	Little	None	No answer
Oral comprehen.	64.50	32.20	3.20	--
Oral express.	32.25	58.00	6.40	--
Reading	45.00	48.30	3.20	3.20
Writing	32.20	58.00	6.40	3.20

The participants felt they had made great progress in oral comprehension. But 58%, 48.3%, 58% felt they had only made slight progress in oral expression, reading and writing, respectively. We intend to perfect this questionnaire and analyze the results more conclusively when our numbers are more significant.

As soon as we can, we intend to organize a comparative study of results obtained with suggestopedic and control groups using traditional methods. However, we already have evidence of the effectiveness of Suggestopedia on the basis of results from traditional tests currently used to measure the level in a foreign language.

One of our students from the course held last May/June, an engineer in an important building concern and an absolute beginner before attending our course, wrote to us recently. He told us that he had just been tested by the French Petroleum Institute, a large organization which runs a lot of further education courses itself. The test showed that our student achieved a level of English usually reached after two or three years of study with conventional methods.

Following the publication of the book, *Une Revolution dans l'art d'apprendre* (A revolution in the art of learning) and numerous articles in the press, hundreds of teachers have expressed a great desire to live the suggestopedic experience and are awaiting the opportunity to do so. We shall have to make available teacher training programs, and this will be a very great task.

Two years of study and reflection and one year of actual experience have convinced us that any teacher wanting to make the leap from traditional to suggestopedic teaching will have to make a gratifying, but difficult, personal adjustment.

To become a suggestopedic teacher, it is necessary to question one's options, both on a professional and personal level. It is necessary to rid oneself of one's drive for perfectionism which most language teachers--and, subsequently, the students--have been conditioned to have, stressing

the language for the sake of language, to the detriment of its function of communication. The suggestopedic teacher-to-be must also understand that the input of new material on relaxed students, in a state of pseudo-passivity, can be more efficient than the state of tension, the intense physical and mental concentration traditionally requested of the students.

And, on top of it all, the teacher who wishes to work according to Suggestopedia must thoroughly examine the quality of his inter-personal relationships, understand the importance and meaning and influence of his social attitudes and reactions. The suggestopedic teacher is a teacher with a broader awareness.

At present, there are two of us, in France, teaching according to the suggestopedic method. Three teachers are leaving for Sofia in the next few days to study at the Institute of Suggestology within the framework of the Franco-Bulgarian cultural agreement. During the 1978/1979 school year, sixteen courses for the learning of English are being offered, five of these are at the University, which will have three suggestopedic teachers by June of 1979.

For the suggestopedic teaching of other languages, the German course is already scheduled for June, 1979, the French course for English-speaking people for August, 1979. The Russian course is being prepared and should be ready some time during the autumn of 1979. These experiments are organized by the French School of Suggestopedia.

Une année de Suggestopédie en France
L'auteur présente les différentes techniques de la méthode suggestopédique telles qu'on les utilise dans des situations variées en France.

Ein Jahr der Suggestopädie in Frankreich
Der Verfasser skizziert die verschiedenen Methoden des suggestopädischen Unterrichts, wie sie in Frankreich in verschiedenen Lernsituationen angewandt wurden.

Un año de sugestopedia en Francia
El autor esboza varias técnicas de instrucción sugestopédica usadas en diferentes situaciones de aprendizaje en Francia.

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SALT Teacher's Checklist

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Abstract

This checklist of SALT classroom activities can be used both as a guide for the teacher in preparing SALT lesson plans, as well as a checklist for evaluating teacher use of SALT procedures. The checklist here is the result of tryout and revisions over several years of classroom use and is reasonably satisfactory for both purposes. No claim to perfection is made and no attempt has been made to compare teachers by totalling item responses.

Teacher Checklist for SALT Lessons

Rate yourself each day: 0-Not possible, 1-Not used, 2-Little, 3-Used, 4-Much use.

Physical arrangement of room
1. Attractive room, posters and displays
2. Grouped, semicircular arrangement
3. Lighting turned off (subdued)
4. Quality music reproduction equipment

Teacher preparation
5. Authority, "I can help you learn," or equivalent
6. Positive beliefs, "You students can learn this easily."
7. Acceptance and respect for all students shown

Student preparation
8. Suggest, "School is a place to learn," or equivalent
9. Suggest, "Learning is easy, fun and efficient."
10. State, "Rely on me (teacher) for learning."
11. Physical relaxation exercises, 1-5 minutes (optional)
12. Mind calming exercises, 1-5 minutes
13. Early pleasant learning restimulation, 1-2 minutes
14. Success goal-setting imagery

Presentation of material
15. Review of previously learned material
16. Preview, new material given briefly
17. Positive use of gestures and facial expressions
18. More material than normal presented (stuffing)

Active session

19. Dynamic, dramatic deliver
20. Three level variation of intonation
21. Varied pace in delivery, slow-fast
22. Students have material to watch
23. Imagery given by teacher or requested of students

Passive session

24. Preliminary relaxation, 1-3 minutes
25. Material presented evenly and calmly
26. Material given with background music
27. Music, breathing and material synchronized
28. Associative, free-flowing imagery encouraged

Practice session

29. Role playing, games, skits or songs
30. Psychological protective personalities given (new identities)
31. Self-corrected quiz, not collected nor graded
32. Error correction done indirectly and immediately
33. Mind calming at close

Liste de contrôle des professeurs de SALT

Cette liste de contrôle des activités d'une salle de classe de forme SALT peut servir de guide au professeur dans la préparation de ses classes de même que dans l'évaluation de ses techniques pédagogiques. Cette liste a été établie après plusieurs révisions et maintes expériences pédagogiques. Bien qu'on n'ait pas essayé d'évaluer les professeurs en additionnant les réponses point par point, ceux qui utilisent cette liste de contrôle la trouvent sinon parfaite, du moins satisfaisante.

SALT Kontrolliste für Lehrer

Diese Kontrolliste von SALT Klassenzimmertätigkeiten kann dem Lehrer bei der Vorbereitung der SALT Aufgaben als Führer sowohl als auch zur Auswertung der Anwendung von SALT Methoden dienen. Diese Liste ist das Resultat von Erprobung und Umarbeitung nach einigen Jahren der Anwendung im Klassenzimmer und reicht für die beiden Zwecke aus. Es wird nicht behauptet, daß sie perfekt sei, und es ist nicht versucht worden, durch Zusammenzählung der einzelnen Beantwortungen die Lehrer zu vergleichen.

Lista comprobante del maestro de SALT

Esta lista comprobante de las actividades de una clase de SALT puede ser usada como una guía para el maestro al preparar los proyectos de una lección de SALT así como también para evaluarlo en dicho procedimiento. Esta lista es el resultado de ensayos y revisiones de muchos años de uso en clase y es razonablemente satifactorio para ambos propósitos. Ninguna afirmación de perfección se ha hecho, y no se ha tratado de comparar a los maestros a través de las respuestas conseguidas.

BOOK REVIEW

Ostrander, Shelia and Schroeder, Lynn, with Ostrander, Nancy. *Superlearning* , New York, Delacorte Press/Confucian Press, 1979. Reviewed by Richard A. Wheeler, MD, 5918 Windsor Drive, Des Moines, Iowa.

This fast-paced, highly readable book is geared not only to those interested in staying abreast of the (for lack of a better name) mind-expanding movement but also to all those interested in exploring and applying what is currently known about this area of human potential in the teaching-learning situation, both in the classroom and personally in the quiet of one's own home.

The teaching aspect is addressed in the first of the four sections of the book. Primarily it is the history and work of Georgi Lozanov of Sophia, Bulgaria which is presented, with many lesser references to work by others throughout the world, supporting, paralleling or supplementing the Lozanov work. In particular, the work of the German Johannes H. Schultz and the Spanish Alfonso Caycedo parallel Lozanov's work though it is to Lozanov that the authors primarily refer.

Chapters in section one are devoted to such topics as historical background, development of programs in the Western world, the elements a teacher needs to know to apply this teaching technique, the necessary attitude in both the teacher and the student, how to apply the technique on oneself, and how to coach children in accelerated learning. In brief, the primary elements necessary for accelerated learning as described by the authors include a pre-delivery period of quieting oneself physiologically with a relaxed focussing of attention so that one does not try too hard but rather prepares for an enjoyable and relaxing learning experience. Those familiar with yoga, hypnosis, bio-energetics, transcendental meditation and others will recognize many of the points of the approach described. This pre-delivery period serves to open communication links between the body and mind and between the conscious and unconscious mind, thereby leaving all possible ports of entry open for the material being learned. One very important aspect of the actual presentation of material to be learned by this technique is that of rhythm, with a slow musical background to which the student coordinates his breathing cycle and to which also the teacher adjusts a cadence of delivery of the material being presented.

The common thread running through the work of all investigators is the holistic theme. The person who integrates all levels of living, the physical, mental, emotional, spiritual, creative and intuitive aspects of life is open to development of superior abilities. This state may sound difficult to attain, but, according to reports by these authors, thousands of schoolchildren and adults in many experimental programs have been led through a superlearning experience with a resulting upgrading of learning speed and long-range retention of the material presented in this manner.

The second section is on superperformance, the development of peak athletic ability and also contains a chapter on pain control. It is in this second section even more than the first that a certain cloak-and-dagger aspect creeps in as the authors detail how it became obvious to all who tried to get information about Lozanov's work from behind the Iron Curtain that those countries viewed his work as having political and military potential. Perhaps Olympic athletes became political cannon

fodder, and Iron Curtain nations were not about to give away secrets on how to train superathletes.

Section three is entitled, "Super-rapport." The first of the four chapters is on "Future Abilities," the second goes into "The Well-tempered Hunch: Professional and Personal," the third deals with "Second Sight," and the fourth "Bio-rapport." This section is necessarily speculative, though a great deal of authenticity is secured through the descriptions of experimental work, interspersed with anecdotal material and quotes by persons with respectable credentials. The "Second Sight" chapter deals with blind people and Project Blind Awareness, which, under the leadership of Carol Ann Liaros, began in Buffalo, New York in 1973. These blind people were taught to "see" with the skin of their palms, fingertips and foreheads, and are reported to be able to detect color, gain a sense of the printed word, and have gained a heightened sensitivity to their environment to the point that a true believer in extrasensory phenomena would see many elements of ESP in their demonstrated abilities. This chapter is a fascinating account of how an open-minded, dedicated and well trained instructor can lead individuals to attain capabilities beyond themselves. In the instance of the Project Blind Awareness group, their development led naturally into ESP experiments with many of the blind people gradually developing skills they had not considered possible, much to their amazement and gratification. This chapter ends with a series of exercises by which individuals and groups can undertake to train themselves in the development of these same abilities.

In this third section reference is also made to the "standing wave" theory of all physical manifestations in the universe, according to which all things, simply summarized, can ultimately be thought of in terms of musical chords and progressions. Some call this the "music-of-the-spheres" theory. Within the context of this book, harmonics and vibrational identities between minds purport to explain ESP and ultimately to point out the unity of all life and, finally, all things.

The fourth section of the book treats Yoga, concentration, visualization, autogenics, and children's exercises. The authors include a large series of exercises, drills and disciplines gleaned from many sources. Many of these are mentioned and described earlier in the book, but it is convenient to have them all in one section.

The book contains much interesting conjecture on the outer limits of superlearning and superabilities and on the role of ESP and other aspects of mentation in this process. This conjecture is scattered throughout the whole book, sometimes stated and sometimes implied, making it more interesting to the casual reader but leaving the more serious reader to wonder uneasily at times just where to separate science from speculation. The authors wrote the book with the a priori assumption that ESP is an everyday experience available to all who care to recognize its presence and train themselves in its use. Hard scientists might find this difficult to accept; indeed, they might reject the whole book as arrant balderdash on these grounds. For those whose minds are open to the possibility of greatly accelerated learning and of greatly expanded mental capabilities this book is a very readable presentation that offers exciting applications for the teaching professional and the self-help enthusiast.

The value of the book is greatly enhanced by an appendix which includes a recap of the book, a detailed list of sources with addresses, a very extensive bibliography, and an index. A scanning of the bibliography reveals that a vast majority of the sources is in scientific literature, and the serious classroom teacher and other professionals will find this very reassuring.

BOOK REVIEW

Saferis, F. *Une Revolution dans l'Art d'Apprendre: Perspectives suggestopediques: Comment apprendre vite, memoriser durablement et utiliser son savoir*, (A revolution in the art of learning: How to learn swiftly, memorize efficiently and use your knowledge.) Paris: Robert Laffont, 1978, 231 pages with tables, and an Introduction by Gabriel Racle. Reviewed by Wil Knibbeler, Catholic University, The Netherlands.

This is the first volume in French on Suggestopedia. The book is composed of three parts. In the first part, entitled "Les etonnements d'un professeur d'anglais" (The Astonishments of an English Teacher), the author gives a detailed and interesting account of her visit to the Institute of Suggestology in Sofia in 1976, where she was trained suggestopedically as a teacher of English. At present she uses the suggestopedic approach teaching English to adults in Paris. The second part is a description of the science of Suggestology on the basis of the Lozanov Thesis entitled *Souguestologuia* (1971). It deals with the theory on the interaction between man and his environment and with the basic concepts such as suggestion, suggestibility, non-specific mental activity, paraconscious, set-up, reserve capacities, double-planeness and pseudo-passivity. The third and last part is concerned with Suggestopedia or, rather, as the author calls it, Suggesto-pedagogy, i.e. the implementation of the theory in classroom-practice. Saferis presents here a detailed picture of the results achieved in Bulgaria (section 2) and in the rest of the world (section 3). In section 2 the teaching of foreign languages to adults is treated on the basis of the Lozanov Thesis (1971) (24 pages) and the teaching of reading, writing and mathematics to children on the basis of the issues 1,2, and 3 of *Suggestology and Suggestopaedia* (1975) (18 pages). In section 3 the author gives a brief overview of the suggestopedic implementations in the GDR, USSR, Hungary, Austria, Canada and France. The volume ends with 19 tables, a list of 9 addresses of the principal suggestopedic centers in the world and a selected bibliography.

At the beginning of the second part of her book (p. 67, footnote 1) Saferis states that this chapter intends to be a brief presentation, as faithful as possible, of Lozanov's work for the non-specialist, in order to explain the essence of Suggestopedia, to demonstrate its importance and to stimulate gathering further information in the original work. It seems to me that this applies to all the chapters and that the main value of Saferis' publication, which is otherwise written in a pleasant and entertaining style, lies precisely in this.

The first part owes its value to the precise and detailed description of the author's personal experiences and observations in Sofia, the other parts derive theirs from the fact that the author succeeds in translating Lozanov's ideas into an accessible language. She has dropped all medical data with which only experts may be familiar. In contrast to Lozanov, she presents the different elements of the system in a logically structured sequence. She has made a judicious selection from the mass of information delivered in Lozanov's book. She translates complicated concepts into clear-cut formulations. She gives an exact interpretation of what is labelled "infantilization" in English publications (p. 107) and an adequate equivalent of what is called "double-planeness" (p. 108) and "set-up" (p. 128). Mostly she is clear and concise in her definitions (see e.g. pp. 26, 68, 74, 75, 96, 101, and 118. In the section L'enseignement suggestopedique et les modifications physiologiques qu'il peut entrainer (pp.

147-154) the author describes the psycho-physiological measurements which were undertaken at the Sofia Institute, in such a way that it becomes understandable for the non-specialist. This is not the case in Lozanov's work. Moreover, it was a good idea to relegate all the tables to the appendix. It makes the book more readable.

Unfortunately, this book also has some imperfections.

1. Although, in general, Saferis spends great care on her definitions, she is not always very rigorous in this respect. Defining the science of Suggestology, on page 26 she restricts herself to the statement that this science studies the effects of the environment on man, whereas on page 68 she adds that this science tries to establish the conditions for creating the suggestive phenomena which enable us to tap the reserve capacities.

2. Saferis gives an account of the memorization experiments in foreign language teaching (pp. 130-140), in which in almost all cases over 90% of the words were memorized. But she does not attempt to answer questions like: how many cognates and how many derivatives were there among the lexical items to be learned, and were irregular morphological forms considered as new items? For such and other pertinent questions and obvious critical remarks I refer to Winnykamen (1978) and Mignault (1979). In short, Saferis was dazzled by what she saw and heard in Sofia, and is too ready to accept all that without criticism. She transmits too easily arguments delivered by others. Let me illustrate my remark by just one example. On page 199 Saferis, quoting Racle, says that motivation cannot be measured. However, there exist valid instruments for measuring motivation.

3. Saferis' references are not up-to-date. In the section on paraconscious activities (pp. 83-86) she refers to such scholars as Charcot (1825-1893), Bernheim (1840-1919) and Freud (1856-1939). One can think of more recent references and more sophisticated experimental research also.

4. Generally speaking, Saferis is well informed about developments in Suggestopedia in various countries (section 3, pp. 174-202). She appears especially acquainted with the Canadian situation to which she devotes 13 pages. On the other hand her knowledge of the situation in the United States is rather poor. She mistakenly locates the SALT Conferences in Iowa City. As a matter of fact, these conferences were held at Iowa State University in Ames. And, which is worse, Saferis does not mention the *Journal of Suggestive-Accelerative Learning and Teaching*, which has appeared in Des Moines since Spring 1976. Moreover, when speaking about the plans for the French Suggestopedia School, the author only mentions as possible links the Sofia Institute and Suggestopedia Canada. I wonder why the French School does not intend to collaborate with the Society for SALT?

5. There are a few misprints in this volume. I will give some examples: p. 18, line 17 *consciecence;* p. 50, line 3 *non;* p. 154, line 20 *Songuestologuia;* p. 181, note 4 *Lozano.*

In spite of these weaknesses *Une Revolution dans l'Art d'Apprendre* is a manual that contributes to a better understanding of the key concepts, aspects and principles of Suggestopedia and must be considered as one of the most important publications on Suggestopedia after Lozanov's Thesis.

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Hypnosis and Language Learning

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Unpublished Master's Paper
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Abstract

This is a critical review of the literature on hypnosis and language learning. It includes hypnosis used to expedite language learning, applications of hypnosis, reinforcement habits, expanding consciousness, increasing concentration, aiding memory, building motivation, removing mental blocks, reducing anxiety, increasing original thinking, developing self-confidence, suggestology-suggestopedia, SALT and conclusions.

J. of Suggestive-Accelerative Learning & Teaching, 1979, (4)1

Erratum

SALT, 1978, 3(3), page 224: The picture was printed reversed, so that all captions should be left-right reversed.

1980 SALT
Conference Workers

Right:
Charles Schmid,
Conference Chairman

Lower right:
Jon Edwards,
SALT President

Below:
Don Schuster,
SALT Exec. Vice Pres.